

## Case Study

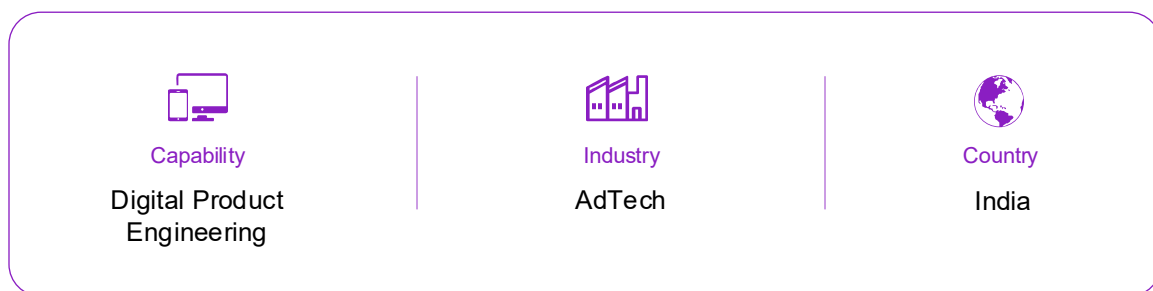
# Aggregator Platform Development for Digital Out-of-Home Advertising

With Quick Planning, Swift Agreement Management, Unified Content Control, Real-Time Communication, Analytics & Reporting & Invoice Management



## PROJECT OVERVIEW

A leading media company partnered with Rishabh Software to build a cloud-native DOOH aggregator platform. The business previously relied on manual workflows, scattered Excel sheets, and vendor-specific systems for digital billboard campaigns, creating inefficiencies and execution issues. They needed to digitize fragmented workflows and create a centralized platform serving advertisers, media owners, and stakeholders as a unified hub.



## KEY FEATURES

Efficient management of DOOH advertising requires centralized tools for campaign execution, content publishing, and financial management. Previously, such coordination was scattered across phone calls, emails, and isolated software tools. This led to delays, errors, and a lack of control. We designed an AWS-hosted DOOH solution, to address these challenges with:

### Campaign & Inventory Management

Enables advertisers and media owners to seamlessly create, schedule, and book ad campaigns while optimizing available billboard inventory.

### Content Management

A centralized DOOH aggregator platform provides creative publishing and playlist control, independent of third-party media owner software.

### Billing & Invoicing

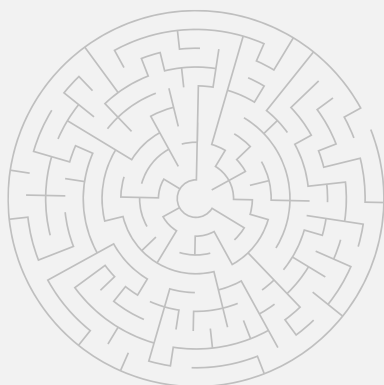
Automates invoicing, billing, and reconciliation processes within the platform and minimizes manual effort and human errors.

### Real-Time Monitoring & Analytics

Facilitates live tracking of campaigns and devices. This is supported by an analytics engine and visualization dashboards for data-driven insights and precise reporting.

## CHALLENGES

- Unorganized data management led to frequent loss of documents and poor visibility.
- Manual workflows slowed execution, resulted in errors, and caused reporting delays.
- Absence of automation tools increased workload and limited scalability.
- Communication via phone/WhatsApp caused miscommunication and poor traceability.
- Heavy reliance on media owner software limited flexibility and content control.



# SOLUTION

We stepped in as a technology partner to build a cloud-native, vendor-agnostic platform that replaced fragmented offline processes with a unified ecosystem. The engagement focused on four critical solution areas:

## Unified Web Portal

Managing campaigns across spreadsheets, calls, and emails slowed execution and created inconsistencies. We solved this by designing a responsive web portal using Angular. It provided advertisers, media owners, and the internal team secure role-based access and streamlined campaign booking, approvals, and collaboration in one place.

## Backend Services Suite

We built a suite of microservices in .NET Core covering campaign scheduling, inventory booking, billing, user management, and administration. This modular backend automated routine workflows and reduced external dependencies while ensuring accuracy and efficiency.

## Data Platform & Analytics



Lack of real-time visibility adversely impacted decision-making and reporting. We implemented PostgreSQL with a warehousing layer to centralize data and resolve this issue. On top of it, we built dashboards and an analytics engine for live campaign monitoring, performance insights, and optimization opportunities. This enabled stakeholders to make data-driven decisions.

## Security & Integrations


We secured the platform with role-based access control (RBAC) and the inherited security of AWS. We added audit logging at the application level so teams can track actions and maintain the system with ease. Currently, the platform connects only to analytics data, but it's ready to expand when new integrations are needed.

# TECHNOLOGIES & TOOLS


Frontend




Backend



Database



Cloud



# Outcomes

64%

faster onboarding of stakeholders

87%

reduction in manual errors

50%

faster decision-making

## ABOUT RISHABH SOFTWARE

As a Digital Engineering and Enterprise Transformation leader, we empower businesses to scale, innovate, and thrive in today's digital-first world through technology rooted in trust and transparency. We leverage emerging capabilities such as Cloud, Data Engineering & Analytics, AI, Automation and Application Engineering to drive digital transformation and unlock new opportunities. We have successfully served across 25+ countries, and we work towards customer delight as "WE CARE."

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