



Mindtree

A Larsen & Toubro Group Company

# Data Management Platforms

What You Always Wanted to Know But Didn't Know Who to Ask

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# 1 INTRODUCTION

Marketing Technologies (MarTech) and Advertising Technologies (AdTech) are evolving rapidly and becoming increasingly complex, with the emergence of several types of product categories. In this paper, we will explore the major building blocks based on our experience with several clients.

The focus of this paper is on Data Management Platforms (DMPs). A DMP provides several capabilities relevant to advertising and marketing. However, there is not enough clarity about what a DMP should do and which DMP is best for specific requirements.

In this paper, we will take a deeper look at the DMP marketplace and how they can be used for your AdTech and MarTech use cases. In particular, we will look at the main features to consider in DMP platforms and who the key players are in this marketplace along with their information. We will also provide advice regarding the suitability of different DMPs to help you pick up the right technology for your specific requirements.

## 1.1 How to Read this Paper

This is a rather detailed paper. You should read it fully, but depending on your role, there are some sections that you can focus more on.

If you are a technologist or a practitioner evaluating different products, you should read section 3 and 4 very carefully. These sections go into details of DMP technology and the key vendors in the marketplace.

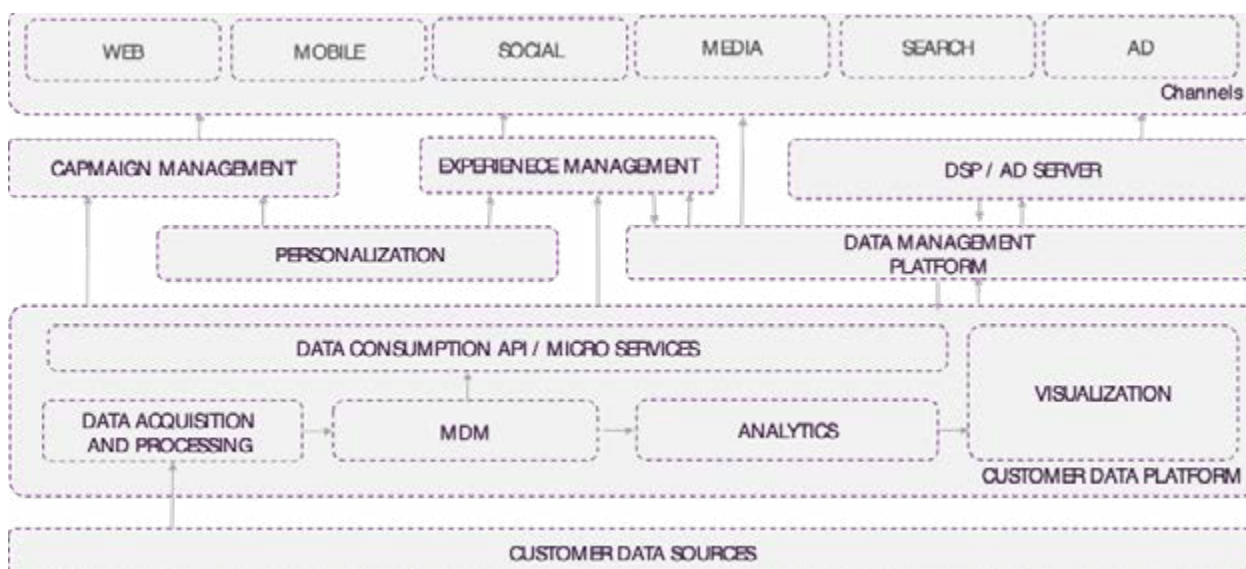
Senior IT, Marketing and Business Executives who are interested in broadly understanding AdTech and MarTech landscapes can go through sections 2 and 4.



## 2 KEY TECHNOLOGIES IN A DIGITAL MARKETER'S TOOLKIT

### 2.1 Marketing Technology Mix

Mindtree's customers use a number of marketing technologies for different aspects. The following block diagram shows some of the key marketing technologies used by Mindtree's customers.



#### Personalization

Personalization is a key component of customer experience and is one of most important tools in a marketer's toolkit. Personalization can provide unique experiences to customers. The experiences are tailor-made, based on a user's behavior or preferences. Many content management systems (CMS) offer capabilities such as a rules editor and content spot that can be used to personalize content. You can use external recommendation engines such as Certona and Richrelevance. These engines provide personalization capabilities based on user activity, browsing behavior or buying patterns.



#### Campaign Management

Campaign management systems help you reach out to customers via email, social media and other channels. They typically work in conjunction with other systems such as Customer Data Platforms (CDPs) and CRMs and help you run campaigns, sometimes even across multiple channels. You can undertake Email Marketing, Search engine marketing (SEM) as well as Social Media Marketing (SMM). These let you run paid promotions and campaigns on search engines and display partners, as well as social media sites such as Facebook.



## Digital Experience Management

Digital Experience Management is a cross-organizational discipline to support user journeys across multiple platforms or channels. It is not a single solution, but usually consists of several building blocks. The important ones are:

1. Customer Communications Management: Customer communications management (CCM) solutions improve customer experience through personalized and automated communications.
2. Web Content Management (WCM): Web content management (WCM) solutions help you manage content and customer experience for digital properties.
3. Digital Asset Management (DAM): Digital asset management (DAM) solutions help you manage digital media, branding, audio and video assets.
4. Analytics: From strategic marketing to customer service, organizations have exhaustive data about their customers, including transaction histories, mobile app usage data, contact center records and more. Analyzing all that data can provide important insights for decision making.



## Customer Data Platform (CDP)

A Customer Data Platform integrates data from several platforms to create a unified profile of customers. It also helps in orchestrating customer journeys across multiple channels. This platform typically works with other enterprise technologies like Master Data Management (MDM), Product Information Management, Data Warehouse, Customer Relationship Management (CRM) and different Marketing/Campaign Management applications.



## Demand Side Platform (DSP) and Ad Serving

Demand Side Platforms (DSP) help advertisers purchase available ad space from publishers in real time. DSPs contain targeting and decision-making processes, also found in ad servers, to help advertisers improve the performance and effectiveness of their campaigns.

An ad server is a technology platform responsible for making decisions about what ads to show on digital channels, serving them, and collecting and reporting the data (such as impressions, and clicks).



## Data Management Platform (DMP)

Data Management Platform or DMP is another key component of Marketing Technology. Like CDPs, a DMP aggregates customer data from different sources, helps you create audiences or segments and then helps you in digital advertising, run campaigns and personalized content. However, DMPs are different from CDPs in a number of ways, and we explore these differences in detail in a later section.

**In this paper, we will focus the factors you should consider while evaluating DMPs for your needs.**

## 2.2 CDP Vs DMP

At first glance, these two systems appear very similar, and often, marketers get confused between them. So, let us quickly understand how they are different from each other, after which, we will look at the key DMP features.



### Different Focus

CDPs focus on marketing use cases whereas DMPs focus on advertising use cases. CDPs work across all the aspects of Marketing such as personalization, marketing automation, and campaigns, while a DMP focuses primarily on advertising and helps agencies to improve the ad-targeting.



### First-Party Vs Third-Party Data

CDPs mostly focus on First-party data whereas DMPs are more focused on Third-party data (we will explore first-, second- and third-party data in a later section).

For any marketing programs that require 360 degree profile data of customers, both systems are used together. CDPs and DMPs enrich each other's data for smarter customer communication or targeting.



### Data Retention

Data retention is longer in the case of CDP, as compared to a DMP.



### Personally Identifiable Information (PII)

Profile identification in CDP is more deterministic and uses customer data like email and phone numbers. Profile identification in a DMP is more probabilistic in nature, and is based on anonymous digital identifiers like cookie ID.

## 3 WHAT TO LOOK FOR IN A DMP

There are several DMPs in the market and all vendors claim they can do everything. However, when you are evaluating different DMPs, you should carefully evaluate the following main features along these broad dimensions:

### 3.1 Data Ingestion

This refers to the DMP's capabilities for data ingestion from online and offline sources. A DMP brings in data from a variety of different sources. There are three main aspects in data ingestion:

1. Data collection
2. Types of data sources supported
3. Data integration



## Data Collection

Broadly speaking, there are three kinds of data relevant for marketing:

- 1st party data: This is collected by the organization that needs the data. This could be through channels such as onsite analytics audience information, web analytics or any offline first-party data such as customer-relationship management (CRM) data or data from a brick-and-mortar store.
- 2nd party data: This is obtained from data providers or partners, and is usually paid for or bartered, e.g., a brand works with publisher audience data or retailer data. A data management platform will allow you to use second-party IDs for ad targeting and to improve attribution modelling.
- 3rd party data: This is typically audience data obtained from multiple sources, aggregators or data exchanges. For example, data aggregated and anonymized by vendors such as comScore and Acxiom would fall in this category. Third-party data is by definition more opaque and is again often used to bolster first-party data when targeting advertising.



## Types of Data Sources

A DMP should be able to work with all of the above types of data, either on its own or via partner integrations. In addition, a DMP should also be able to work with several types of data sources, some of which are:

- Desktop and mobile user data
- Web analytics
- CRM systems
- Point of Sale (PoS)
- Social platforms usage or trends
- Video consumption
- Offline, TV and radio advertising data
- Publisher ad management
- Ad networks
- Demographics
- Credit card purchase statistics

The above is not an exhaustive list of sources, but a set of common sources that Mindtree's customers often use.



## Data Integration

In order to get data from different sources, a DMP needs integration capabilities or a mechanism to derive data from 1st party, 2nd party and 3rd party data sources. The data integration with DMP can be carried out in different ways as follows:

- Website tags - organizations can place a tag on their websites or mobile apps (like a Google Analytics tag), which sends user engagement data directly into the DMP.
- On-boarding for 1st and 2nd party data - customers provide their data and the DMP vendors help to import it into the DMP. In some tools, it is possible to build custom integrations to ingest user data on an ongoing basis.
- Existing integrations for 3rd party data - DMPs provide numerous integrations with audience data sources. Via DMP integrations, it's possible to click a button, and pull the data into the DMP, and automate bidding and purchasing of data from third party providers.

Many DMPs also use additional peripheral products for help with data integration. For example, Adobe Audience Manager uses Adobe I/O while Salesforce DMP relies on data.com to handle 3rd party data.

## 3.2 Data Management



### Data Management

Once the data is collected from different sources, the DMP subjects it to basic data management tasks (e.g., data cleansing, de-duping, normalizing and so on) and then stitches a unified profile of users. It also provides capabilities for segmenting users based on different attributes and running analytics.

DMP tools provide varying levels of data management capabilities. For example, Adobe Audience manager uses Profile Merging which merges profile data from various sources and then fine tunes segments based on the merging rules and updated data.

Similarly, in the Salesforce DMP, a user matching feature is used to match different customer data across devices and provide a unified user profile.



### Data Analytics

Many DMPs have Analytics capabilities. They provide dashboards and reporting related to audience analytics, customer engagement and so on.

There are several different flavours of analytics, and you should clearly define your requirements. While most DMPs will provide some level of analytics, some of them provide advanced capabilities such as drill-down reporting, predictive analytics and integration with external analytics products for more complex and sophisticated types of analytics.

As an example, Salesforce DMP has its own Einstein Analytics which is based on Salesforce's Einstein machine learning platform. Adobe Audience Manager leverages Adobe Analytics module to provide different reports and analytics based on segments produced from time to time. Adobe analytics also leverages Adobe's Sensei AI framework and integrates with other components of Adobe's Marketing Cloud.



### 3.3 Engagement

The final step in any DMP is activation or putting the data that has been collected from across channels and devices to work. Activation refers to getting audiences to take action through downloads, opening a video player, registering, voting, polling, or quizzes, typically while they are using multiple devices to consume media.

DMPs rely on integration with other platforms and open APIs for activation. They typically do this by sending audiences or segments to external applications such as personalization engines, ad servers, content management systems or campaign management systems.



#### Demand Side Platform (DSP) and Ad servers

By linking a DSP to a DMP, it is possible to use data to make more informed choices when buying ad inventories.

The audiences or segments from DMP can be sent to ad servers for better ad targeting. This could be done via simple JavaScript-based integration or using more sophisticated integration approaches using tag management or APIs.



#### DMPs and Marketing Tools

DMPs often work with other marketing tools, such as Marketing Clouds of Adobe, Oracle and Salesforce. Firstly, most marketing systems integrate with DMPs and get insights which will be used to enrich their existing first-party data. This can be very useful for marketing use cases. Secondly, DMPs can take first-party data from marketing systems for better ad targeting.

As an example, Salesforce DMP integrates with Salesforce Marketing Cloud using impression pixel and click tracker. The image pixel would be embedded in the body of the campaign which would receive the segments via events.

In fact, DMPs are increasingly being used in conjunction with marketing tools. As an example, Adobe Audience manager is part of Marketing Cloud and works with Adobe Campaign and other components using ID Service.



#### DMPs for Personalization

DMPs work with personalization engines to pass the audience segments to provide a personalized experience to the customer. In general, the DMPs connect to personalization engines on the site using JavaScript and API calls. Based on the segmented data, personalization rules are matched and the experience view (ex. text/ image or snippet in the website) is generated or configured in the personalization engine, which will show up on the website.

### 3.4 Summary of DMP Features

To summarize, the following are the key features that you should evaluate in a DMP.

Data Ingestion	Data Collection Approaches
	Data Integration Approaches
	Data Sources Supported
Data Management	Data Management
	Analytics
Engagement	Activation Channels Supported
	Support for Ad Servers
	Support for Personalization
	Support for Other Marketing Channels

## 4 DMP MARKETPLACE

There are several DMP products in the market. In this section, we have summarized the key capabilities of a few DMPs used by complex enterprises that Mindtree serves.

### Adobe Audience Manager

This refers to the DMP's capabilities for data ingestion from online and offline sources. A DMP brings in data from a variety of different sources. There are three main aspects in data ingestion:

#### Key features:

- Rules-based segmentation on attributes like behavior and demographics
- Targets specific profiles on any content delivery platform
- Reports uncover insights about audiences and helps find segments
- Connects customer journeys across multiple touchpoints
- Collects data about customers from multiple channels for personalization

**Best Suited When:** If you already have Adobe AEM for your website, Adobe Target for personalization and Adobe Analytics for web analytics and tag management, Then Adobe Audience manager can be used

## Oracle Bluekai

### Key features:

- Segments audiences by device and environment
- Optimizes media buys by identifying devices driving conversion
- Personalizes campaigns by device
- Manages advertising dollars by target environment

**Best Suited When:** Bluekai would be ideal for customized websites and when more offline data is involved. It is a good alternative, especially when you have other products from the Oracle Marketing Cloud.

## Salesforce DMP (formerly Krux)

### Key Features:

- Captures, stores and unifies all consumer data, beyond advertising
- Segments audiences automatically using Machine Learning and Artificial Intelligence
- Uses the world's largest device graph to understand a customer's unique footprint and deliver personalized messages on the right platform
- Activates data across all touchpoints to optimize advertising, commerce and content
- Identifies cadence of customer experience, and determines best time to engage
- Access to transparent and trusted audience data sources

**Best Suited When:** If you have already invested in Salesforce Marketing Cloud and use Salesforce CRM, Salesforce DMP would be ideal.

## Lotame

### Key features:

- Combines audience data from any source
- Focuses campaigns on consumers most likely to provide ROI
- Provides access to 2nd and 3rd party data directly inside the DMP
- Links devices to engage customers on the right device at the right time
- Provides insights on audience demographics, interests and behaviors
- Reduces ad waste with frequency capping

**Best Suited When:** If you have more real time calls from different customer management systems and Lotame's proprietary Data onboarding services are used

## Summary of relative strengths

Even though all the 4 tools support most of the features, we would like to draw your attention to relatively key strengths of each tool for specific features. However, there could be a case where 2 tools would have equal strengths.

		<b>Adobe</b>	<b>Oracle</b>	<b>Salesforce</b>	<b>Lotame</b>
Data Ingestion	Data Collection Approaches	Best Fit			
	Data Integration Approaches				Best Fit
	3rd party data support			Best Fit	
	3rd party data import support		Best Fit		
Data Management					
	Segmentation	Best Fit		Best Fit	
	Data Management	Best Fit			Best Fit
	Analytics		Best Fit		
Engagement					
	Activation Channels Supported	Best Fit	Best Fit		
	Supports buying ad targets			Best Fit	
	Data export to Personalization tools to enable Personalization	Best Fit			
	Support for Other Marketing Channels	Best Fit			Best Fit
	Real time personalization			Best Fit	
	Integrates with other DSP to buy targeted ads			Best Fit	

## 5 CONCLUSION

DMPs are increasingly becoming a key component of AdTech as well as MarTech stacks. They not only help in better advertisement targeting, but also work with your marketing tools to target several marketing use cases.

This is an evolving marketplace and several products have emerged that offer different functionalities related to data management, profile unification and activations. If you are in the market looking for DMPs, you must consider the following key features:

- **Data Ingestion**
  - Data Collection Approaches
  - Data Integration Approaches
  - Data Sources Supported
- **Data Management**
  - Data Management
  - Analytics
- **Engagement**
  - Activation Channels Supported
  - Ad Servers
  - Support for Personalization
  - Support for Optimization
  - Support for Other Marketing Channels

Mindtree has implemented DMPs for several of its customers and we can help you with all aspects of selecting and implementing DMPs and other AdTech or MarTech platforms. Please contact us at Nagesh.Gurikar@mindtree.com.



### About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. "Born digital," in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 350+ enterprise client engagements to break down silos, make sense of digital complexity and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of Continuous Delivery to spur business innovation. Operating in more than 15 countries across the world, we're consistently regarded as one of the best places to work, embodied every day by our winning culture made up of 21,000 entrepreneurial, collaborative and dedicated "Mindtree Minds."