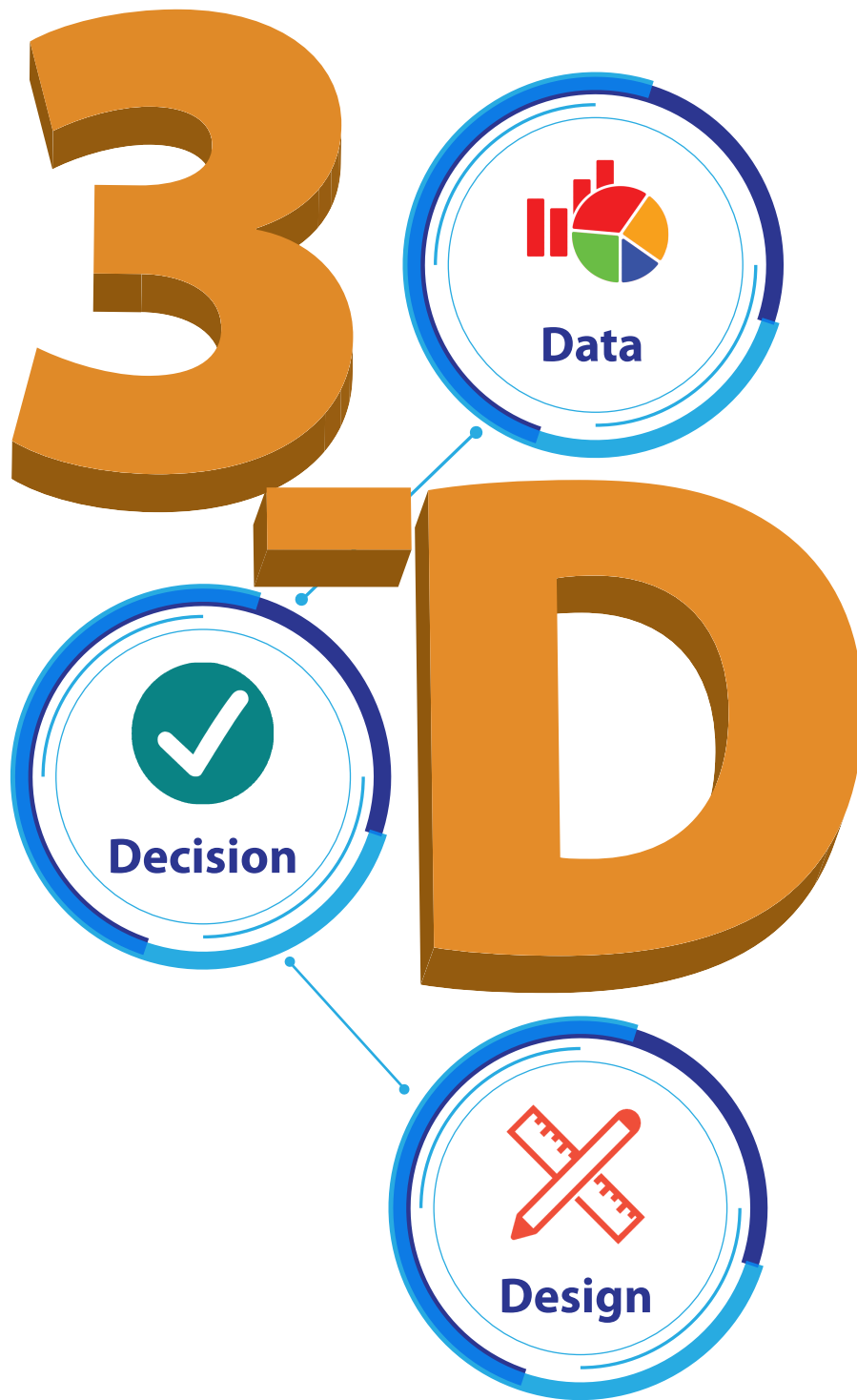




[Whitepaper]

The 3-D approach to Digital Advertising

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The Model for NextGen Advertising

With marketing becoming integral to business ethos and strategy, a 3-D approach is required to succeed in the digital advertising play.

Abstract

Digital advertising is today an integral marketing strategy for organizations, witnessing rising spend compared to other forms of media. That is the result of the opportunity that marketers see in digital advertising due to the availability of abundant behavioral consumer data. However, the advertising industry faces challenges in translating data into actual measurement and accuracy of conversions.

This paper outlines a 3-D approach to tackling and winning the game of advertising. It provides a strategy for succeeding in the competitive advertising market through the use of – Data, Decision, and Design.

Introduction

Digital advertising has undergone a 360-degree transformation in recent times as a result of technological advancement and media fragmentation. However, traditional technology has helped little to improve ad serving and revenue optimization, keeping the entire advertising industry at a disadvantageous position. Numerous concepts, trends, and technologies are promising for the future. This is in addition to consumers becoming increasingly sensitive to user experience while visiting a website or application, thereby demanding the marketers to understand them and be non-intrusive.

There are several challenges with regards to supporting guaranteed and non-guaranteed sales: accommodating new formats such as mobile and video, and responding to evolving requirements such as audience targeting, real-time buying, multi-device frequency capping and new-age ad formats.

We are being flooded with data, at unprecedented scales, from a broad range of application areas. In advertising, it is crucial that we can capture data about different spheres of users to build consumer profiles correctly. That involves online and offline data. There is a higher probability of positive reaction if ads are relevant and timely. Imagine showing the user an ad for a McDonald's store discount when he is around a McDonald outlet during lunch time. Thus, organizations are becoming more data-savvy and paying companies for different kinds of data.

Analysis of the Big Data now drives nearly every aspect of modern society. That is crucial for transiting from intuition-driven decision-making to data-driven decision-making that promises freedom from the painstakingly constructed models of reality. To find the real value from data, we have to deal with problems associated with Big Data like variety, scale, timeliness, complexity, and privacy. To help achieve that, the right technology solutions are required.

Businesses have radically changed in the way they operate and market themselves. It is due to change in the way consumers interact and consume data via the digital elements surrounding us. As a result of the digital boom, consumers have quick access to information and the ability to diffuse both, positive and critical impressions worldwide. Therefore, consumers need both, online and offline experiences that help them understand the large amount of

It is important to work towards building cost-efficient solutions to communicate concepts effectively. Therefore, understanding data and optimizing the revenue from it are of prime importance.

products available in the market, make their choice and appreciate the same or critique it, as deemed fit. As a result of that, they feel a positive proximity with products.

Hence, it is important to work towards building such experiences as cost-efficient solutions to communicate concepts effectively and let the advertiser feel secure about the investment. Technology companies need to work closely with advertising agencies or build in-house expertise to deliver end-to-end marketing solutions. Over the last several years, we, at Tavant Technologies, have been working with key players in the advertising industry to help them understand data and optimize revenue.

Tame the 'Data'

Today, consumers have wide digital presence both, online and offline. It highlights the importance of combining such attributes with other data sources (CRM, web, social, household data, business data, etc.) and correlating them to create meaningful customer segments. The importance of data is evident from the steep rise in popularity of Data Management Platforms (DMPs). They are being sought after by publishers and marketers alike.

The popularity of DMPs (Data Management Platforms) has grown because marketers find multiple data sources necessary. DMPs have been able to increase efficiency, reduce media waste, and ensure legitimate use of anonymized digital data.



Smart publishers are partnering with DMPs to acquire data about their audiences and subscribers.

On the other hand, marketers seek ways to design addressable marketing programs that reduce media waste and create targeting efficiencies based on data from their databases. Marketers increasingly want to blend their own customer data with that of third parties in order to understand their audiences. That is why DMPs have gained much traction in ad tech over the past few years. Such systems enable fast ingestion and parsing of massive quantities of

Along with engagement, customer verification in real-time is critical for efficient marketing. It enables elimination of spend on non-functional leads for better engagement authenticity.

Organizations may find data piling up from ad gestures, but they also need to extract quality information at low cost for a high ROI. For accurate data, organizations are approaching agencies such as publishers, advertisers, and ad exchanges.

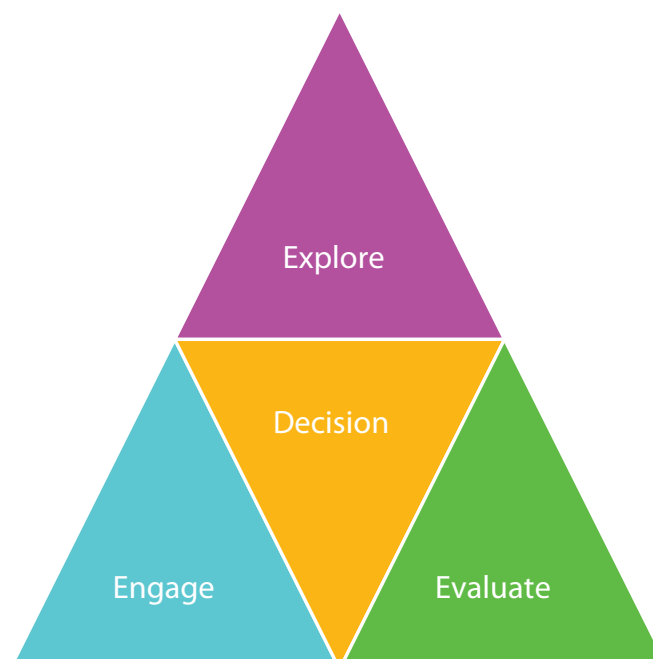
anonymized digital data legitimately. Accessing the data allows marketers to engage more personally with localized messaging and customized offers, by legitimately matching the interest, purchase history and media consumption of consumers.

There are some challenges associated with non-browser based channels, including mobile, because DMPs typically rely on third-party cookies to build and target audience segments. Moreover, there are privacy concerns about blending third-party behavioral data with first-party data due to the presence of personal information. However, data providers are picking this up and consolidating audience information from all available sources via an integrated and secure management system, which is privacy-friendly and works across all advertising distribution platforms.

It is also important to capture qualified metrics with respect to engagement – both ad and audience engagement. Ad engagement tries to explore and see if the ad was compelling for the user and if users are interacting with it in some way.

Audience engagement includes identification of users contributing to the conversation and paying the most attention. The need is to move away from legacy interaction metrics like impressions to viewable impressions, which report a more accurate impression count. It should also be understood that brands are inquisitive about engagement. Hence, there might be a need to think of different ways to encourage user interaction. For example, using rich media and video, and storing the metrics effectively.

Along with engagement, customer verification in real-time is critical for efficient marketing. Verification is crucial as it enables elimination of spend on non-functional and phantom leads, giving complete control over authenticity of the engagement. Standardization of these procedures and technology benchmarks will lead to increased conversions, in turn yielding more revenue.



Publishers need an ad-serving and revenue optimization platform to assess the market value of their inventory, after which they can package, traffic, manage, and optimize it.

Today, marketers purchasing high-quality data inventories need to scale up the use of technology to ensure measurable impact and ROI. Only then will they find Big Data converting into actionable information.

Make the Right 'Decision'

Consumers are increasingly inclined towards personalized experiences, and they expect intuitive, device-agnostic responses. They contribute to Big Data that is piling up from ad gestures like clicks, searches, and shares, leaving behind a trail of contextual data.

To meet and deliver on consumer expectations, enterprises must sense and analyze current contexts from multiple channels such as the internet, mobile, offline and online media. They must also achieve all this and simultaneously maintain low costs and good margins. Thus, organizations need data but they also need the right set of tools/technologies and resources to extract meaningful, timeless information, maintaining low costs and high ROI. They in turn rely on agencies for accurate data.

Agencies include publishers, advertisers, and ad exchanges. Technology empowers such stakeholders in different ways.

Publishers

Publishers need technology to identify, target, package, and sell specific audiences to their buyers, to create robust audience profiles, giving up a lucrative revenue stream in the process. Publishers need an ad-serving and revenue optimization platform that lets them assess the market value of their inventory, then package, traffic, manage, and optimize inventory across all of their channels in a holistic manner.

Key decisions to be made:

1. Real-time evaluation of impressions
2. Calculating true value of Cost Per Mille (CPMs)
3. Track which demand channels actually fill the inventory

Advertisers

Today, advertisers are focused on buying high-quality inventory from ad exchanges to meet campaign goals and avoid wastage of impressions. Programmatic buying is a classic example of technology helping in the evolution of digital advertising, being rapidly adopted as a mechanism with the transformative power to help marketers reinvent brand marketing and research. However, the fact remains that a lot needs to be done to capture its full potential.

Technology needs to scale up to capture and measure events in real-time to show breakthrough insights. That will help marketers to measure impact and return on investment. When that happens, technology will be converting Big Data into actionable information.

Ad Exchanges

For accurate data from ad exchanges, event-driven technologies like Akka, ZeroMQ, and Spray can reduce the cost of ownership significantly and achieve higher throughput with unchanged server configurations.

Creating a seamless user experience or amplifying a brand's presence across screens demands a high level of creativity and plays a less active role in creating digital ads.

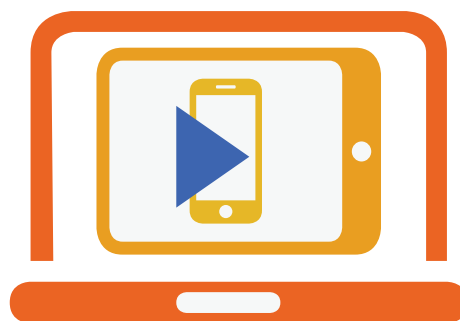
Marketers today are data driven and expect high precision information based on which they can run their programs. Areas like inventory forecasting can be tapped to capture individual profiles to increase ROI as a result of solid data points. However, such granularity will increase the data volume significantly and require a robust data pipeline to process it.

It is also possible to optimize campaign performance in near real-time by monitoring the gradient of ad serving by geography, device, time of day and/or other metrics. Ad servers can be optimized by using highly concurrent event-driven technologies, for e.g. Akka (toolkit and runtime for building highly concurrent, distributed, and resilient message-driven applications), ZeroMQ (high-performance asynchronous messaging library), and Spray (high-performance, asynchronous HTTP). Using such technologies, the cost of ownership can be brought down significantly. Being concurrent in nature, these will enable horizontal scaling down of ad servers to achieve higher throughput with similar server configurations.

'Design' to Deliver Best Experience

The third force that governs the digital advertising world - design - deals with the art of making an impression in the minds of consumers with the objective of creating immersive marketing.

Marketers need to explore and exploit the emerging disruptions in new forms of media such as digital video as new ways to capture attention and ignite conversations. To bring brands and consumers together, the industry needs innovative and inspiring digital communications.



Additionally, the digital space is constantly evolving with a steep rise in popularity of mobile and tablet devices. That is resulting in proliferation of screen sizes, operating systems and browser engines, which in turn lead to challenges in designing the right creative. A great amount of creativity is required to embrace cross-screen advertising as a seamless user experience. New ways must be explored to help brands amplify their presence across all screens.

With continued emphasis on standardization of ad formats, along with the long-running banner and text ads, tremendous growth is visible in video and rich

media ads. Companies should take that into consideration while designing their marketing strategy.

Finally, there is a definite shift from traditional use cases where brands used to play an active role in ad-creatives. Today, most of that is being handled by advertising companies. Therefore, realization of creativity is central to success in digital advertising.

Bringing it Together

Let us take an example to understand how a combined approach using data, decision, and design can help organizations weave a successful marketing story.

For an organization planning to excel in the ad-tech space, it needs to craft a planned approach to reap the true benefits of digital advertising. To tame the data, it is important to enable integration with third-party data sources to enrich the data pool for better decisions. Alongside, one needs to figure out a balanced strategy to churn the massive amounts of data using batch, as well as a real-time pipeline. It is required to cater to the needs of business users as well as ad-ops teams who have different roles and ways to utilize the same data. That can be achieved using a lambda architecture to avoid duplicity and implement maximum reusability.

Moreover, there is a need to move away from descriptive analytics to predictive and prescriptive analytics. Such analytics can be achieved by combining machine learning algorithms and statistical models. Some use-cases of such analytics can be found in inventory forecasting at a granular level as an individual profile. For example, aggregating the request and event data at the level of geo (country, state, zip), age group (10-20, 20-25, etc.), car (BMW, Mercedes, etc.) will help in better utilization of inventory and also acquire trusted and targeted sales. However, it comes with challenges in terms of data volume and response times, which needs an effective tech stack to avoid roadblocks with exponential increase in data with time. The aggregated data is the repository of valuable information. This means that it needs to be plugged back in with the existing data repository for enhancing the diversity of metadata and in turn allowing the optimization of campaign performance and improved ad selection. Measurement of all those metrics and being able to calculate the true impact of the campaign is equally important to gain trust from advertisers.

Apart from using data and technology, organizations should explore ways to evolve creative teams which will be responsible for painting the campaign perspective in the right way. Existence of a creative team instills the confidence in advertisers about handling of an end-to-end brand strategy coupled with transparency in measurement of the results with greater precision.

At Tavant, we are involved in data-driven communications with our clients from the advertising industry, enabling successful implementations of business requirements. We employ advertising intelligence to allow our clients deliver impactful and compelling experiences to their customers.

About Tavant

Headquartered in Santa Clara, California, [Tavant](#) is a digital products and platforms company that provides impactful results to its customers across North America, Europe, and Asia-Pacific. Founded in 2000, the company employs over 2500 people and is a recognized top employer. Tavant is creating an AI-powered intelligent enterprise by reimagining customer experiences, driving operational efficiencies, and improving collaboration.

About Author

Sarvesh Gupta helps design and implement analytics solutions for Tavant Technologies. He has extensive experience in big data and data science, while being actively involved in cutting-edge technology projects in the areas of big data mining, machine learning, and data visualization. He has exposure to multiple domains including advertising technology, broadcasting, gaming, and e-commerce. When not coding, he enjoys reading, painting, stock trading, movies and music.



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