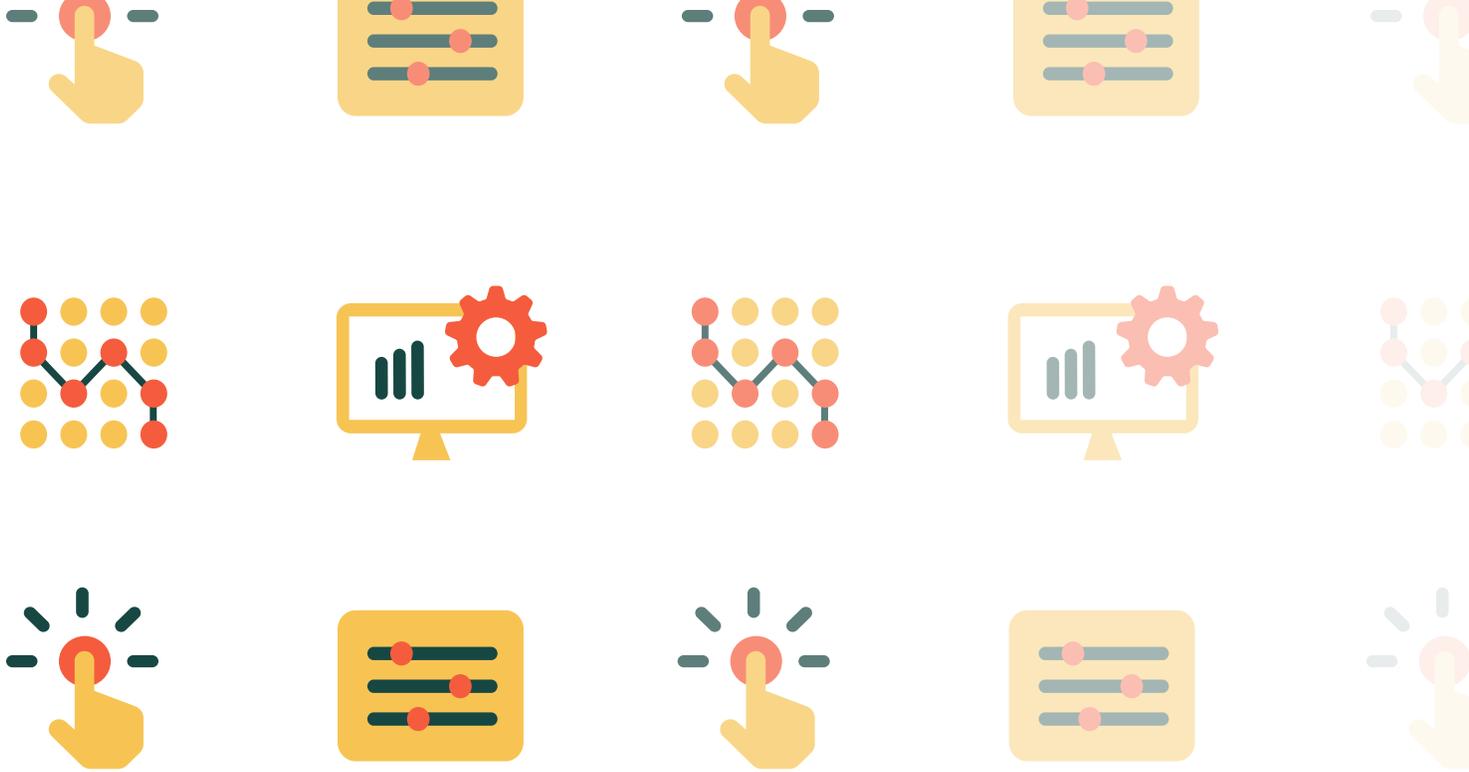


The Changing Face of Optimization

How shifting your approach can
maximize your programmatic investment

BEESWAX 



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The word ‘optimization’ gets thrown around a lot in the programmatic industry. It’s a key element of any and every successful programmatic strategy. However, most programmatic optimization today alternates between “black boxes”, where you don’t really know what’s happening, and simplistic levers that limit how much you can control -- the consequence being results that fail to meet advertisers’ expectations.

We designed this guide to walk you through the current state of optimization and help you understand the need for a shift in approach as programmatic continues to become the mainstream method for transacting media spend across digital channels.

Quick Refresher: Optimization 101

Let's begin with a definition.

Optimization is the process through which one finds an alternative with the most cost effective or highest achievable performance under the given constraints, by maximizing desired factors and minimizing undesired ones.

[Source](#)

It's a pretty straight-forward concept, and one we've used in advertising and business for ages. So why the extra focus now?

It all boils down to the nature of programmatic advertising, or the automated buying and selling of digital inventory based on audience and contextual data. The permutations of that data, the information advertisers use to determine whether or not to buy a particular ad and what price to pay for that ad in real time, is essentially infinite. Advertisers can target audiences based on any combination of online (and sometimes offline) data points, including time of day, day of the week, demographics, geography, previous shopping behavior, historical onsite behavior, etc. But, there are a few factors that advertisers should hone in on when it comes to driving their optimization strategies.

Key Factors that Power Optimization:

The who, The where, The when, and The \$\$\$

The key to delivering a successful optimization strategy lies in using the data available to you to ensure you're reaching the right users, in the right place, at the right time, and of course, at the right price. But to do that, you have to first understand the value of each of those factors. It's the only way you can begin to “*find an alternative [strategy] with the most cost effective or highest achievable performance under the given constraints*”.



So, we've pulled together the 4 key factors advertisers should prioritize when building optimization strategies:

Optimization Factors	What Is It?	Who Controls It?
<p>THE WHO: User Scores</p>	<p>How valuable is the customer: How can you use first-party data, the most valuable part of the puzzle, to score users based on their intent levels?</p>	<ul style="list-style-type: none"> • The advertiser/media buyer (in conjunction with their DMP or CRM system)
<p>THE WHERE: Inventory Factors</p>	<p>How valuable is the inventory: Every RTB call has hundreds of inventory elements. How can you value these elements to ensure you're reaching your customers in the places most conducive to conversion?</p>	<ul style="list-style-type: none"> • The advertiser/media buyer
<p>THE WHEN: Time Decay</p>	<p>How long has it been: Data becomes less valuable over time, so when was the last time you saw this user?</p>	<ul style="list-style-type: none"> • The DSP • The advertiser/media buyer can also manage this as a part of the user scoring process
<p>THE \$\$\$: Bid Shading</p>	<p>How much is the impression worth: Based on the above 3 factors, what is your predicted value for this impression? How much should you bid to maximize win rates?</p>	<ul style="list-style-type: none"> • The DSP



*Tip: How Does Optimization Work for Inventory?

Inventory Factors are some of the most important elements of the programmatic optimization mix, as they contain the most variability and need for control. In an ideal world, advertisers will begin a campaign with a broader data set and bidding strategy. As insights and results roll in, the optimization system will refine the strategy. Maybe you'll see lower conversion rates across iOS versus Android, so you can reduce your bids on those devices accordingly. This process of "winnowing down" and biasing bidding towards the inventory options that work can be done by machine learning, by humans manually, or by some combination of the two.

Creating an Optimized Bidding Strategy

Combining the above key factors, in addition to any other data inputs that are relevant to your campaign, are key to creating an optimized bidding strategy for every user in question. So ultimately, your bidding strategy should ideally look a little like this.

	User Score	Inventory Factors	Time Decay	Bid Shading	
	 X	 X	 X		= Bid Price X
	 X	 X	 X		= Bid Price Y
	 X	 X	 X		= Bid Price Z

You determine the ideal bid price for every potential impression based on how you value each factor deemed relevant to your strategy. It sounds like a lot of complex work -- but it doesn't have to be. And ultimately, it ensures your programmatic strategies are optimized for both effectiveness and efficiency, maximizing the return on your digital spend.

Optimization Challenges Today

All that said, there remain a few core challenges with the programmatic landscape today that prevent buyers from delivering the type of optimization we just described. In an effort to wield more control, [65%](#) of programmatic buyers in-housed their strategies in some form last year. But the fact is, advertisers looking to take more ownership over their programmatic optimization strategies are left to choose between 3 faulty options:

1. Trust the DSP's "Black Box"
2. Rely on simplified optimization levers
3. Build their own technology

1. Trusting the DSP "Black Box"

In today's [post-GDPR world](#), consumer privacy is of the utmost importance. But traditional DSPs were simply not built to provide advertisers with the data security they require. Due to the nature of these traditional platforms, they inevitably lead to data leakage and sharing -- intentional or not.



Just consider the events of last year. We saw incidents of data [commingling](#) that can no longer go unnoticed.

As an example, consider traditional demand side platforms (DSPs) that use a single machine learning algorithm across all of their clients. The learnings from a campaign for beverage company A would help inform the same strategy used by beverage company B, should the two use the same DSP. So, it comes as no surprise that [62%](#) of organizations admit that they are not fully leveraging their first-party data -- how can they? While brands might have the ownership over the first-party data they input into these platforms, they're not maintaining ownership over the output. And their optimization strategies suffer as a result.

2. Relying on Simplified Optimization Levers

The traditional DSP was designed for a time when agencies controlled all things programmatic and simpler use cases sufficed. So, optimization tools were generally built to optimize to vanity metrics like click rates, video complets, and viewability, using the same, standard data across customers.

The consequence of this is not only the inevitable data sharing that we described above but also the loss of any potential competitive edge a particular business might have. Since, every customer using a particular DSP is likely optimizing toward the same metrics the resulting campaign performance is not only limited but looks pretty similar across different customers and competitors too.

“The days of watered down macro metrics are over. Brands now realize programmatic offers a deeper level of granularity and will therefore demand detailed and timely performance stats around their campaigns. Agencies already have to work harder to ensure clients are getting the client service and results they deserve, but this is going to raise the bar a few notches.”

[Molly Glover Gallatin, VP of Marketing for Jelli](#)

Even as legacy technologies have evolved to introduce new optimization tools, programmatic buyers continue to lack the granular control necessary to achieve the results they expect. Just consider the industry’s introduction of the bid multiplier approach -- an initial step toward improved optimization but today are quite limited. Since bid multipliers evaluate each data point, each variable, in an isolated state, they don’t offer full control over the final bid price.

```
iOS (1.2) * Early Morning (1.4) * Whitelist of high  
performing sites (1.1) = 1.65 bid multiplier
```

```
Android (0.8) * Early Morning (1.4) * Whitelist of high  
performing sites (1.1) = 1.35 bid multiplier
```

Example of how Bid Multipliers determine bids

In fact, the combination of multiple variables produce bid amounts that oscillate wildly -- an effect that is only more exaggerated as more variables are chained together.



This is precisely why DSPs limit how many variables can be included in a single bid multiplier (almost always 1) and how many different multipliers may be used (as few as 100). Ultimately, it leaves advertisers without the granular control they need to ensure every bid is optimized to the price that is the most effective and efficient for their strategies.

3. Building Their Own Technology

Those businesses that don't want to rely on the less secure, more simplistic, traditional platforms might make the decision to build their own DSP technology. In doing so, they'd maintain full ownership over their data and full control over their optimization technologies.

That said, very few (if any) brands have the resources to build and maintain their own bidding stack. One of the key-challenges of in-housing according to [IAB research](#) comes is lacking resources -- both in the form of time and human talent (think traders to execute, data science teams to optimize, engineers to build and maintain, etc.). Not to mention, creating the technology from scratch is incredibly expensive and often, the ultimate performance doesn't lead to positive ROI.

Those who are ambitious may look into investing in these resources, but the fact remains that a recent [Forbes survey](#) revealed that most businesses underinvest in marketing performance resources because leadership does not see the financial connection between data, analytics and marketing performance improvement. Originally viewed as a channel to monetize remnant inventory and make a little extra cash, there was never a real need to align programmatic performance to greater business goals. Now that programmatic is becoming a major revenue source for many companies, however, the need to bridge the gap between programmatic teams and overarching business KPIs is clear.



The Way Forward

All this to say, today's approach to optimization, from the advertiser, agency, and DSP perspective, is limiting the potential of programmatic as a key revenue channel for most businesses and minimizing the competitive edge of every advertiser. The need for a shift in optimization tactics is clear, and we believe the answer lies in flipping the model to take a bottom-up approach.

BEESWAX 

Bidder-as-a-Service™:

Offering every level of optimization, to meet every need

Beeswax's Bidder-as-a-Service™ empowers today's advertisers with the technology and flexibility they require to maximize the value of their programmatic campaigns through custom optimization strategies tailored to their unique business goals.

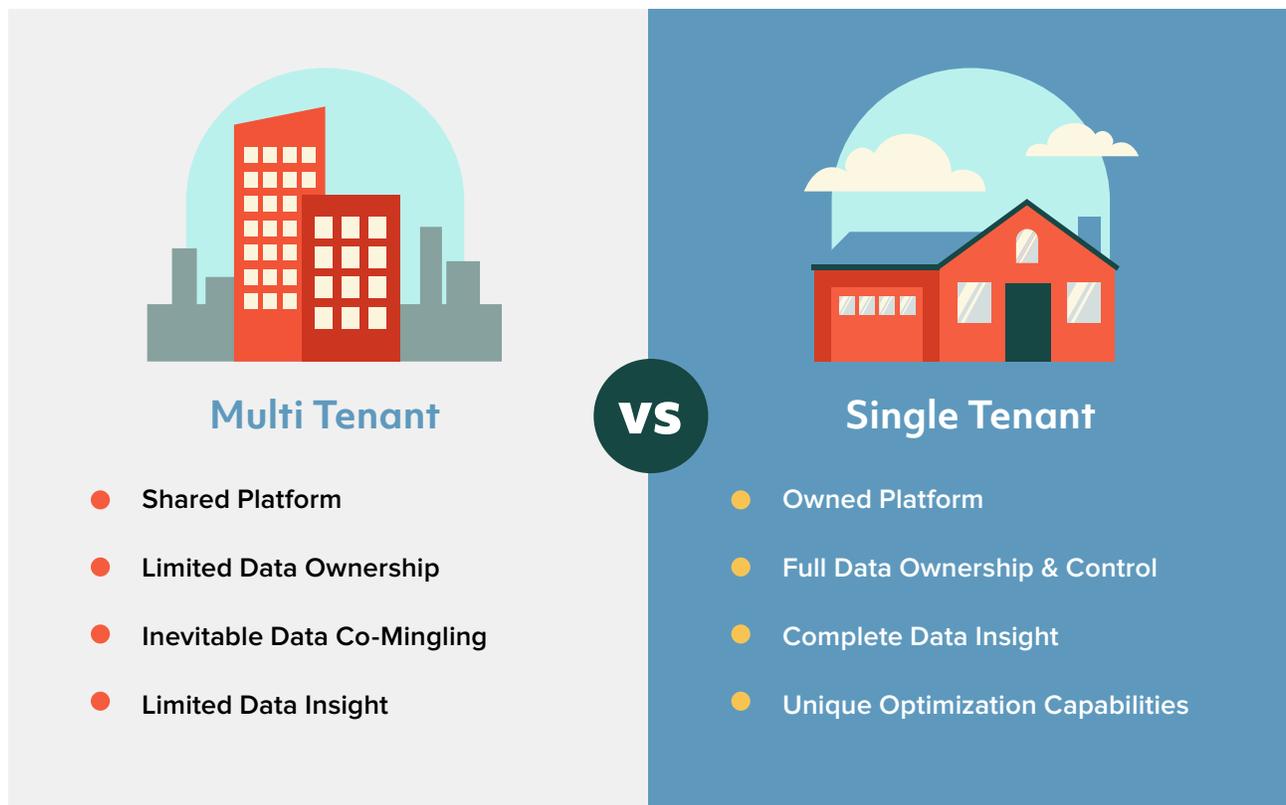


Why BaaS? Addressing Today's Optimization Challenges

1. Don't trust the DSP "Black Box"

Enter Beeswax's Single-Tenant Architecture

Designed for the current state of the industry, the Beeswax platform is built on a single-tenant architecture, deploying every customer in their own cloud instance.



The diagram compares two architectural models. On the left, 'Multi Tenant' is represented by a city skyline with several red buildings of varying heights. Below it, a list of four red bullet points outlines its characteristics: Shared Platform, Limited Data Ownership, Inevitable Data Co-Mingling, and Limited Data Insight. In the center, a dark green circle contains the text 'VS'. On the right, 'Single Tenant' is represented by a single red barn-like building with a dark green door and windows. Below it, a list of four yellow bullet points outlines its characteristics: Owned Platform, Full Data Ownership & Control, Complete Data Insight, and Unique Optimization Capabilities.

Multi Tenant	VS	Single Tenant
● Shared Platform		● Owned Platform
● Limited Data Ownership		● Full Data Ownership & Control
● Inevitable Data Co-Mingling		● Complete Data Insight
● Limited Data Insight		● Unique Optimization Capabilities

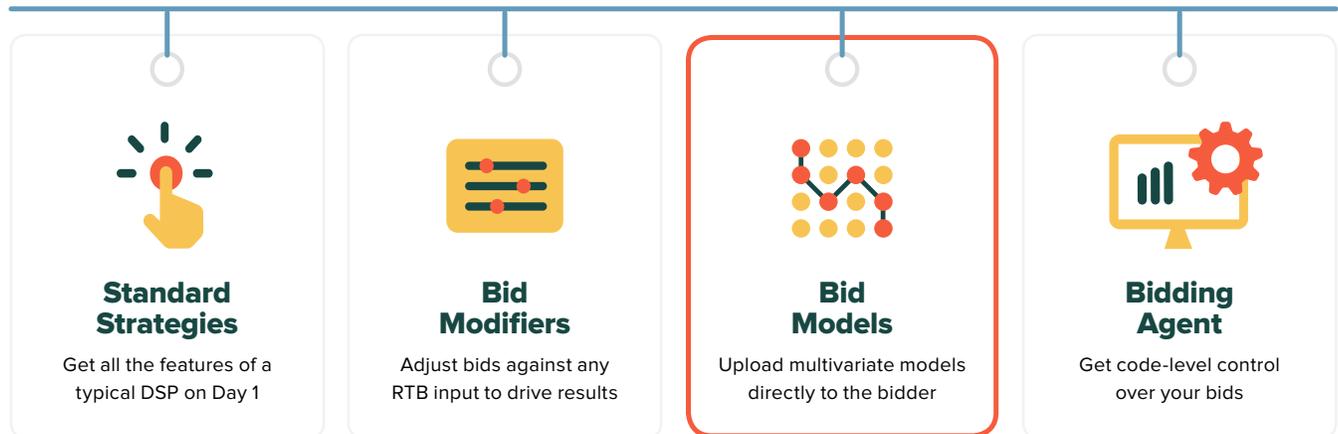
As opposed to the multi-tenant approach where a single instance of the platform serves multiple advertisers, Beeswax enables each of its customers to maintain full ownership over their programmatic strategy. Not only does this ensure complete data security and prevent any data leakage, but it simultaneously allows customers to tailor the platform to meet their specific business needs.



2. Don't rely on simplified optimization levers

Meet Beeswax's Suite of Optimization Tools

In response to the limited, black-box nature of traditional platforms coupled with the lacking resources of most businesses, Beeswax designed a suite of optimization tools to empower every programmatic buyer.



3. Don't build your own technology

Introducing Beeswax Bid Models™

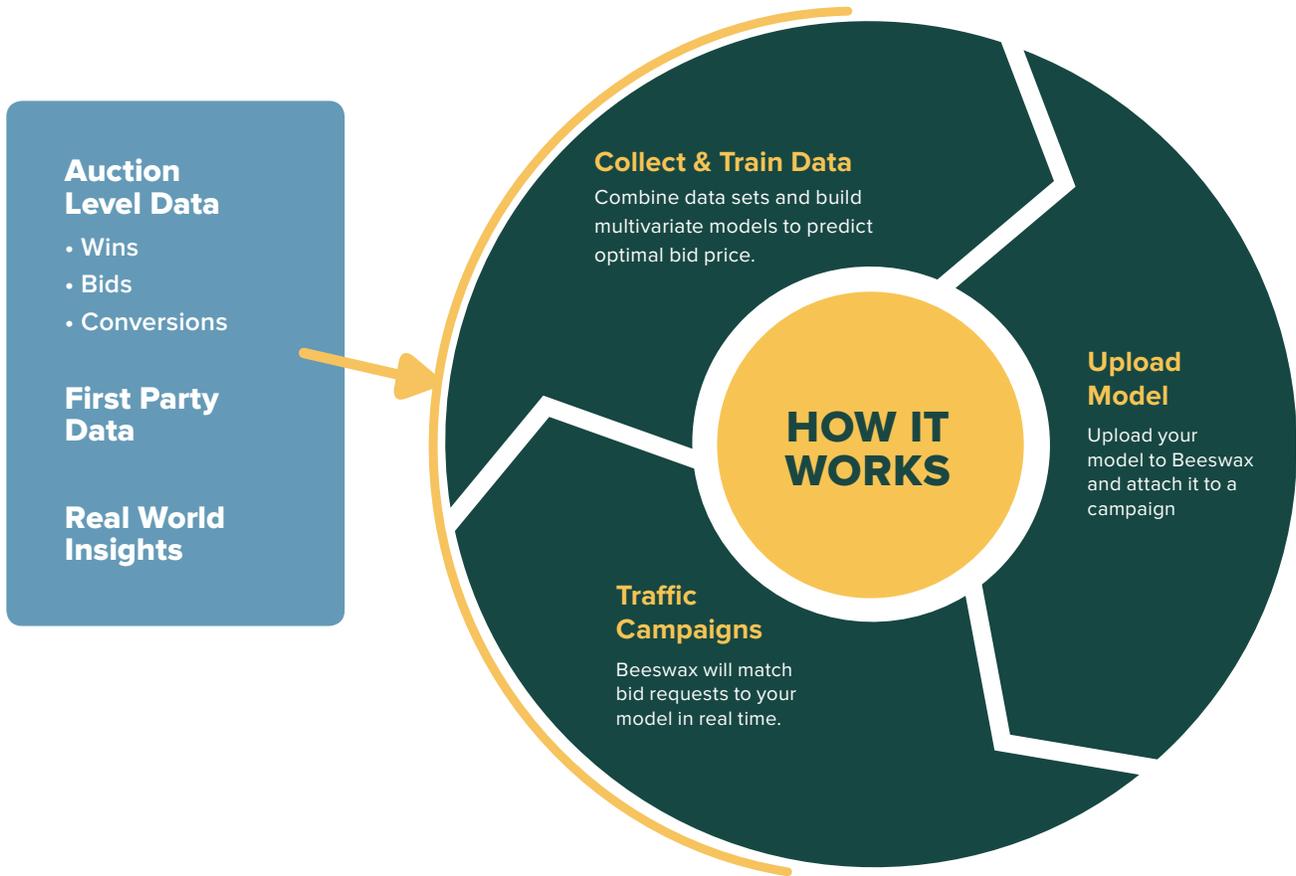
Beeswax understands that today's advertisers are not only lacking the resources to build their own DSP, but they also may not have the resources to deploy custom code-level optimization strategies.

This is precisely why we designed Bid Models. With the help of just a single data scientist or analyst, media buyers can run complex, multivariate data models -- ones that look strikingly similar to the bidding strategy we referenced earlier -- to optimize their programmatic bidding strategies.

Hour of Day	Operating System	Domain	Bid
8:00	iOS	site1.com	1.23
9:00	iOS	site2.com	2.34
10:00	iOS	site2.com	2.33
11:00	iOS	site2.com	4.56
etc			



In just a few steps, these models can be uploaded to their instance of the Beeswax platform to be applied to their programmatic campaigns, simplifying what has previously been a complex and resource-intensive process.



So what's next for the ever-evolving programmatic landscape? It seems like every week brings new opportunities into the mix. So as we enter a new era, where programmatic continues to become the primary tool for transacting digital media, Beeswax is confident that advertisers will arm themselves with the knowledge, skills, and technological resources they require to own the fate of their programmatic destiny.

Interested in learning more about how you can customize your optimization strategies with the Beeswax approach? Or how you can use Bid Models to enhance your optimization strategies?

[Speak to a Beeswax expert to learn more >](#)

