



MAD



This version of the MAD whitepaper is released as a working draft - with the purpose of introducing the idea and receiving feedback from the blockchain community. If you wish to contribute by leaving your comment or review, please email [thoughts@madnetwork.io](mailto:thoughts@madnetwork.io) .

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# ABSTRACT

The ad tech supply chain consists of advertisers, publishers and a series of costly middlemen. The middlemen designed the programmatic ecosystem to maximize revenue for themselves rather than for the advertiser and publisher. Today, machine learning for ad placement is priced as a luxury service, often taking a large percentage of the ad spend. At MAD, we believe these services are commodities and should be treated as such.

MAD's consensus algorithm, Proof of Real Work, commoditizes these services by utilizing necessary work both to secure the network and match relevant ads with available inventory. Proof of Real Work powers the ad server to facilitate the fairest deal possible between the advertiser and publisher as the algorithm is not invested in its own profitability. Rather, the ad server supports an ecosystem of miners who are incentivized to create faster, more efficient machine learning algorithms to win the block.

# EVOLUTION OF AD TECH

Programmatic advertising, or the use of software to purchase digital advertising, is growing at a rapid pace. According to Adweek, programmatic display spending will reach \$33 billion in 2017, with 74 percent of total U.S. digital display ad dollars spent going to private marketplaces and programmatic setups. Programmatic ad spending is expected to grow to \$45 billion by 2019.

Prior to the expansion of programmatic spending infrastructure, advertisers and publishers managed transactions manually, a process that proved to be slow and inefficient. Now, most manual agreements are reserved for large-scale placements that are consequently inflexible and cumbersome. This rigid infrastructure makes actively optimizing ads difficult, and gathering data about their performance an even greater challenge. Programmatic advertising has introduced a way for advertisers and publishers to transact automatically, decreasing the amount of labor required to serve advertisements, and increasing the advertiser's return on investment (ROI) through data-enriched decision-making.

Programmatic advertising's success hinges on its ability to glean valuable insights from large user datasets. Data gives advertisers better understanding of their targeted audiences, as well as novel ways to optimize their placements for the highest possible conversions. Programmatic advertising also reduces overhead for both advertisers and publishers by outsourcing some decision-making to software.

Programmatic advertising was a huge breakthrough for digital advertising. However, its underlying infrastructure has also presented new problems.

Because the ad tech industry grew organically from the internet's network growth, it has always needed a decentralized model. The ecosystem consists of many remote actors who all try to service the same supply chain.

As the ecosystem evolved, trust had to be enabled by third parties, which resulted in a slew of costly middlemen. The advent of blockchain technology effectively removes the need for trust from the business equation and provides the decentralized tools to build a better ad tech ecosystem.



# Brief History of Ad Tech

In 1994, AT&T was eager to expand the reach of its famous “You Will” campaign, a surprisingly prescient campaign to promote an internet-enabled future (brought to you by AT&T). AT&T thought the newly launched web magazine, hotwired.com, an extension of Wired, would be a great place to promote its “You Will” campaign on the internet. Thus, the internet’s first banner ad was born. Initially, relationships between publishers, like hotwired.com, and brands, like AT&T, were not so different than how brands and agencies interacted with print or TV publishers.

However, increased demand for the internet and an explosion of websites to commoditize this demand soon made the analog model between brands and publishers difficult to manage and scale. Brands could not easily find ad inventory to purchase, and worse, they could not track the effectiveness of the banner ads they did use. Advertisers were forced to contract individually with websites or with publishers with a large network of sites and available ad inventory. WebConnect, an online ad agency, was the first to bundle many sites and give brands access to an open network of ad inventory on its partner sites. This launched the first ad network, which offered brands scale and the ability to price based on the website’s audience.

The first ad network helped advertisers reach a broader audience, but it was still difficult for publishers to reach and sell to potential advertisers. Enter the ad server. In addition to helping deliver ads to display, ad servers such as DoubleClick emerged to track information about impressions and clicks, and to help provide an ROI for ad dollars spent. DoubleClick, which was founded in 1996, saw huge growth as brokers for their ad inventory were aided by the ability to track users more easily through the use of cookies.

In 2000, Google launched AdWords to help monetize its search engine. Instead of images or banner ads, it promoted textually relevant ads to leverage its strength as the premier search experience. Before Google launched AdWords, GoTo.com (later Overture) invented the first Paid Placement Model (PPM). This introduced the auction model to the online advertising industry; the higher the bid, the higher an ad appeared in search results. While Google’s text ads were popular, it was missing the revenue that high-bid advertisers would pay for premium placement. Google’s approach was different from GoTo.com. Instead of just auctioning off placement on key searches, Google judged relevance (and the ad’s price) by how many click-throughs the ad received on a key search. This Pay Per Click (PPC) model proved to be extremely profitable for Google searches. Google later expanded their network with AdSense, which allowed for text, image, video or interactive ads to be displayed on partner websites.

Many publishers and advertisers still suffered from liquidity problems in existing ad networks. Publishers were connected to ad networks, but oftentimes advertisers would purchase excess inventory or be unaware of unused ad space that could be sold for a discount. Ad exchanges emerged to fill this gap.

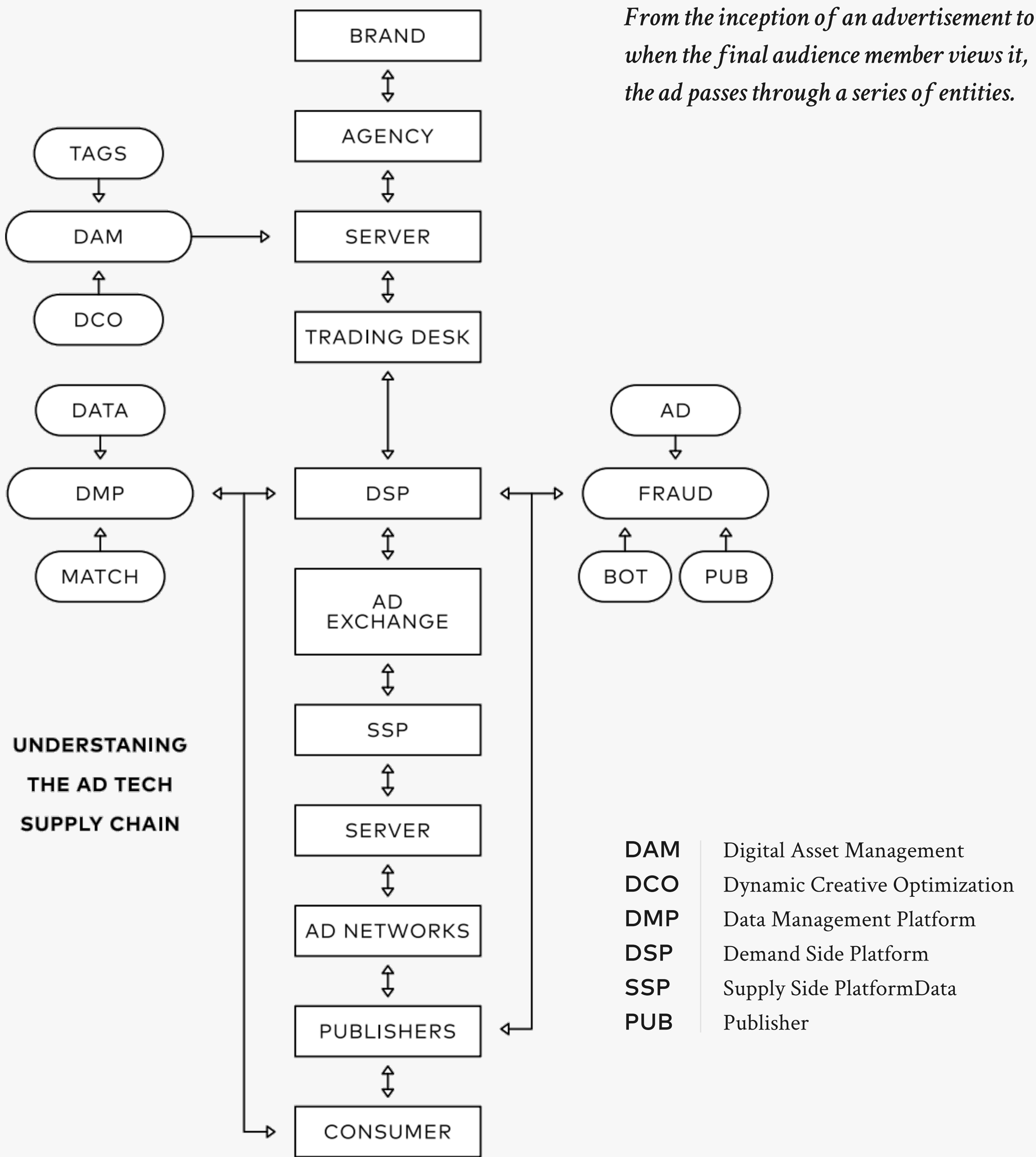
With advertisers submitting campaigns for targeted audiences, ad exchanges would purchase individual user impressions and then match them with the highest bidder from submitted ad campaigns in their system.

As more ad exchanges came onto the marketplace to bundle inventory around the internet, another layer crept into the crowded ad tech space — demand-side platforms (DSPs). DSPs provided a way for advertisers to bundle different ad exchanges to purchase impressions across various ad exchanges, which reached even more ad networks made up of networks of sites offering inventory.

The emergence of mobile and social media platforms in the mid-2000s opened up new access channels and new ways to target audiences. New sites such as Facebook and Twitter first concentrated on gaining a large user base, then determined how best to serve targeted ads to them. By offering advertisers access to ad inventory and the data to target a specific audience, Google and Facebook emerged as the major players in this space. Unfortunately, publishers, audiences, advertisers and brands are all squeezed by the duopoly created by Facebook and Google's "walled gardens."

Outside of Google and Facebook, the space became increasingly complicated as additional layers emerged to transact bundled sets of user data and ad inventory. Real-time bidding (RTB) gives advertisers more specificity in their ad spends, but the myriad of entities in between advertisers and publishers makes transparency of price and effectiveness difficult.

# Current Ad Tech Ecosystem





# PROBLEMS

Although programmatic advertising has alleviated many of the pain points previously felt by advertisers, its growth has also brought a slew of problems, namely supply chain opacity, the “disappearing ad dollar” and data leakage.

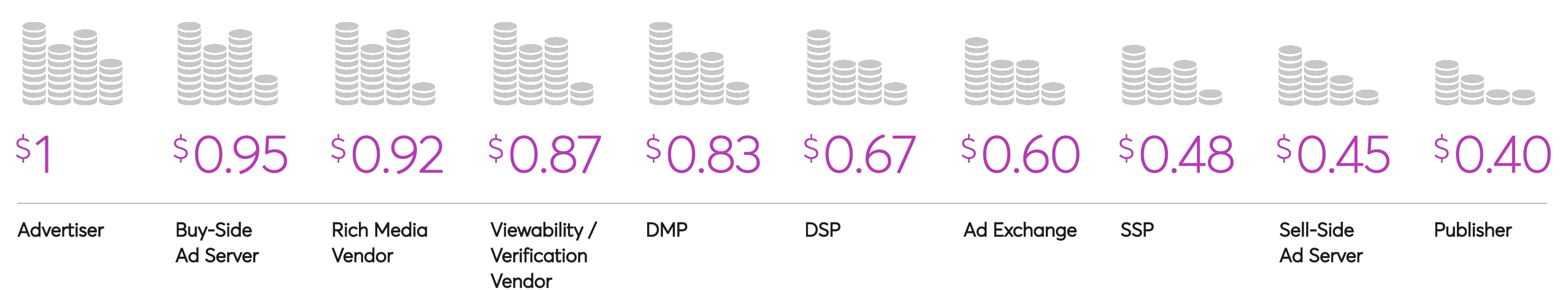
## Supply Chain Opacity

Lack of transparency in the supply chain allows middlemen to get away with some truly unsavory practices. One practice in particular that the MAD Network aims to reduce is auction price manipulation. Price manipulation encompasses a wide array of practices that involve exchanges or publishers misrepresenting or not disclosing data or bids with the intention of controlling the price of ad inventory.

One common form is “dynamic floor pricing.” This technique is used to inflate prices for ad inventory by constantly adjusting price floors. Price floors are generally not visible to buyers, forcing them to raise their bid price in hopes of it being higher than the unknown floor. Although this does protect publishers, it is detrimental for advertisers, especially when there is only one bidder. Furthermore, once a buyer places a bid, they have no insight into the rest of the exchange process. Most ad exchanges refuse to disclose any information; therefore, there is no way to hold them accountable. This lack of transparency opens the opportunity for ad exchanges to directly control prices in second price auctions. Second price auctions are auctions in which the winning bidder pays only one cent higher than the second-highest bid. After an auction is won, exchanges tack on arbitrary bidding fees. These fees are adjusted for every bid and can add up to one cent less than the winning bid price. This defeats the purpose of second price auctions and forces advertisers to pay more than is necessary for ad inventory.

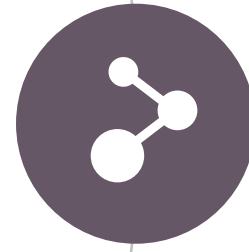
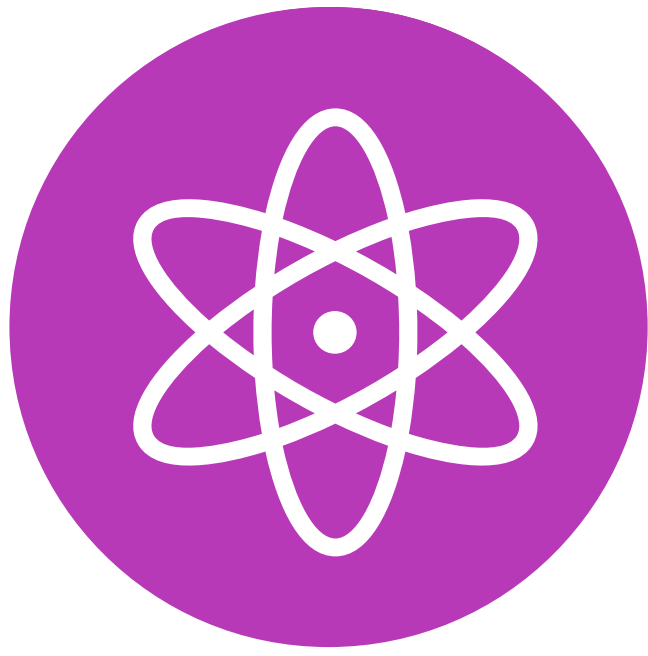
# Disappearing Ad Dollar

The ad tech industry currently requires a great deal of trust to operate. Intermediaries that supply this trust capture more than 60 percent of the value generated in today’s ecosystem, leaving publishers with a fraction of every ad dollar spent. Each party that sits between the advertiser and publisher charges some service fee, which accounts for 5 to 30 percent of each dollar spent. As a result, the majority of the costs boil down to moving data through the system and authenticating each participant in the supply chain. This widespread problem is referred to as the “disappearing ad dollar.” Furthermore, supply chain opacity presents opportunities for rent-seeking arbitrageurs to purchase ad inventory and resell for significant profits. This results in advertisers paying much more than necessary for ad inventory, and publishers earning less.



# Data Leakage

Data leakage is another rampant problem that costs publishers money and stymies the efficient flow of data. In turn, data leakage creates a culture of isolationism that limits the effectiveness of cross-platform targeted advertising. Data leakage is defined by the SANS Institute as the unauthorized transmission of data from within an organization to an external destination or recipient. When publishers sell their ad inventory, they often have to share their data with many third parties to receive the highest bids. This results in data leaking because once the third parties receive the data, they tend to keep it for further use or sale — often without consequence, which results in inventory mispricing. Many publishers refuse to share their data for this reason, and when they do it is often mispriced. For this reason, publisher data is extremely underutilized, and Facebook and Google are able to use their troves of user data to force advertisers to go through them for effective targeting. Although extremely profitable for Facebook and Google, this duopoly creates an unnecessary, costly and inefficient market for digital advertising.



# MAD NETWORK

Blockchain technology promises to alleviate many of the programmatic advertising industry's biggest pain points. Decentralized networks help disintermediate third-party bundlers and link advertisers seamlessly with publishers. Additionally, unlike the current market of data secrecy and walled gardens, distributed systems can more accurately reflect value, effectiveness and campaign reach.

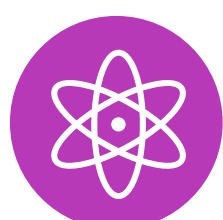
The MAD Network is comprised of three distinct blockchain layers: MADnet Books, MADnet Core and MADnet Data. The MADtoken will be escrowed to activate a payment channel for the accounting, fulfillment and instant reconciliation of ad delivery. Advertisers and publishers will have the option to exchange on credit or settle in real time with their escrowed MADtoken or cryptocurrency of choice. Ultimately publishers have the final say in how they would like to be paid. MADnet Books is a private chain maintained by the AdLedger Consortium, designed to track high-frequency network transactions, expose price manipulation and facilitate accurate reconciliation. MADnet Core is the decentralized ad server and exchange powered by our proof-of-real-work algorithm. MADnet Data is a data storage layer that facilitates pseudonymous, one-time-use sharing of consumer data to increase the value of publisher inventory while drastically improving targeting.

## *Layer 1*



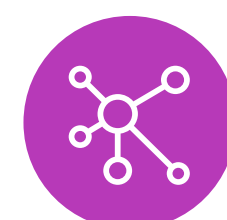
**MADnet**  
BOOKS

## *Layer 2*



**MADnet**  
CORE

## *Layer 3*



**MADnet**  
DATA





## MADNET BOOKS

# Decentralized Payment Rail



MADnet Books is a decentralized payment rail for staking Insertion Orders using MADtoken, an ERC20 token issued on Ethereum. MADnet Books will initially be fulfilled via MadHive's centralized ad server. The decentralized payment rail will open a tokenized marketplace for exchanging the value of an impression. Advertising spend tracking will be open to create a fair, transparent network that penalizes price manipulation. With the advent of the open network, advertisers will be informed of third parties that are involved in the ad placement. The advertiser, empowered with data insights, will no longer be beholden to complicated third parties that are currently taking large margins.

A recent lawsuit explains the state of the ad tech industry. The Guardian sued the Rubicon Project for "recovery of non-disclosed buyer fees in relation of Guardian inventory." Exchanges, SSPs and DSPs often hide fees in the fine print of contracts and manipulate prices by adding arbitrary fees after private auctions. As The Guardian discovered, the ad tech industry has a reputation of protecting information by building black-box systems that third parties learn how to manipulate. Hiding transaction flow allows for bad behavior such as creating fake bids or misrepresenting transaction prices. The payment rail will empower advertisers to avoid inefficient advertising spending and increase the value of their spending.

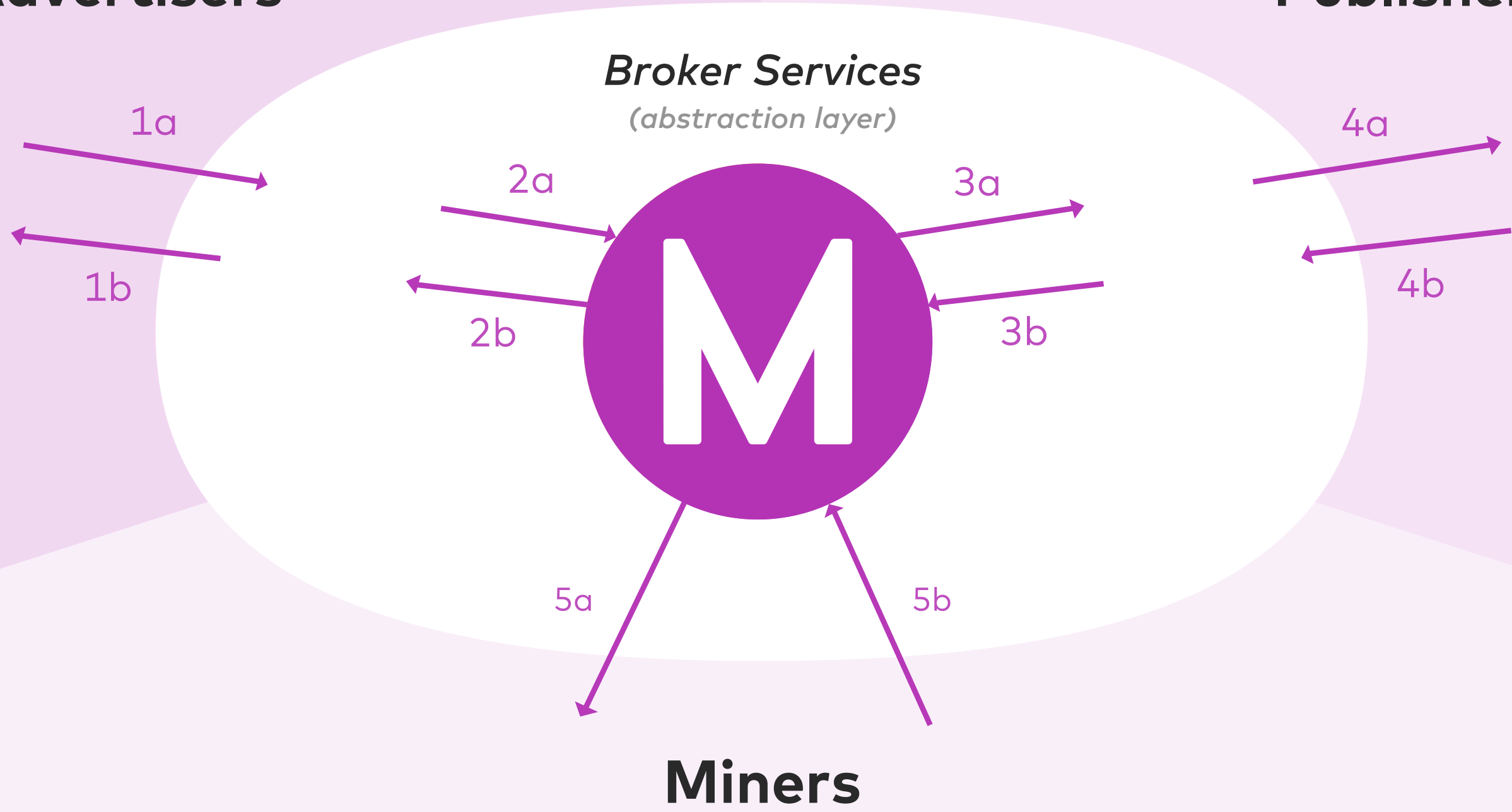
An advertiser will utilize the MADnet Books layer by staking MADtoken to create an Insertion Order. Insertion Orders are smart contracts that specify how ads should be executed. As MADtokens are staked, an equivalent value of credit (“MADcred”) will be generated and exchanged on the MAD Network. The MADcred is paid to the publishers for placing ads in near-real-time. MADcred will be a non-fungible token with an explicit reference to the Insertion order contract in a manner consistent with the ERC non-fungible standard. After the MADcred is spent, a publisher redeems their MADcred in a settlement step based on the payment terms established in the Insertion Order. The publisher then returns the MADcred to the Insertion Order, signaling receipt of payment. As the publisher confirms payment, MADbonus is paid to the advertiser. MADbonus is a loyalty reward for utilizing the MAD Network. If a publisher does not return the MADcred to the Insertion Order, the advertiser may decide to blacklist them to avoid the possibility of not receiving the MADbonus in the future.

Advertisers may stake MADbonus in place of MADtoken for their Insertion Order. MADbonus is a reward for early participation in the network and incentivizes advertisers to continue using the Mad Network by allowing them to reduce the required amount of MADtoken needed when staking Insertion Orders. This also solves the problem of the MADtoken market cap being an upper limit on ad spend that can be delivered on the network at any given time. MADbonus may only be used one time.

MADbonus will be issued in a decay curve. Initially, more MADbonus will be issued to excite new entrants to use the MAD Network. As the MAD Network grows, MADbonus issuance will be reduced. Since the MADbonus maintains its value only when the advertiser makes good on its commitment to pay fiat to publishers, this mechanism further incentivizes publishers to come on the network in order to gain access to the ad spend committed to the system.

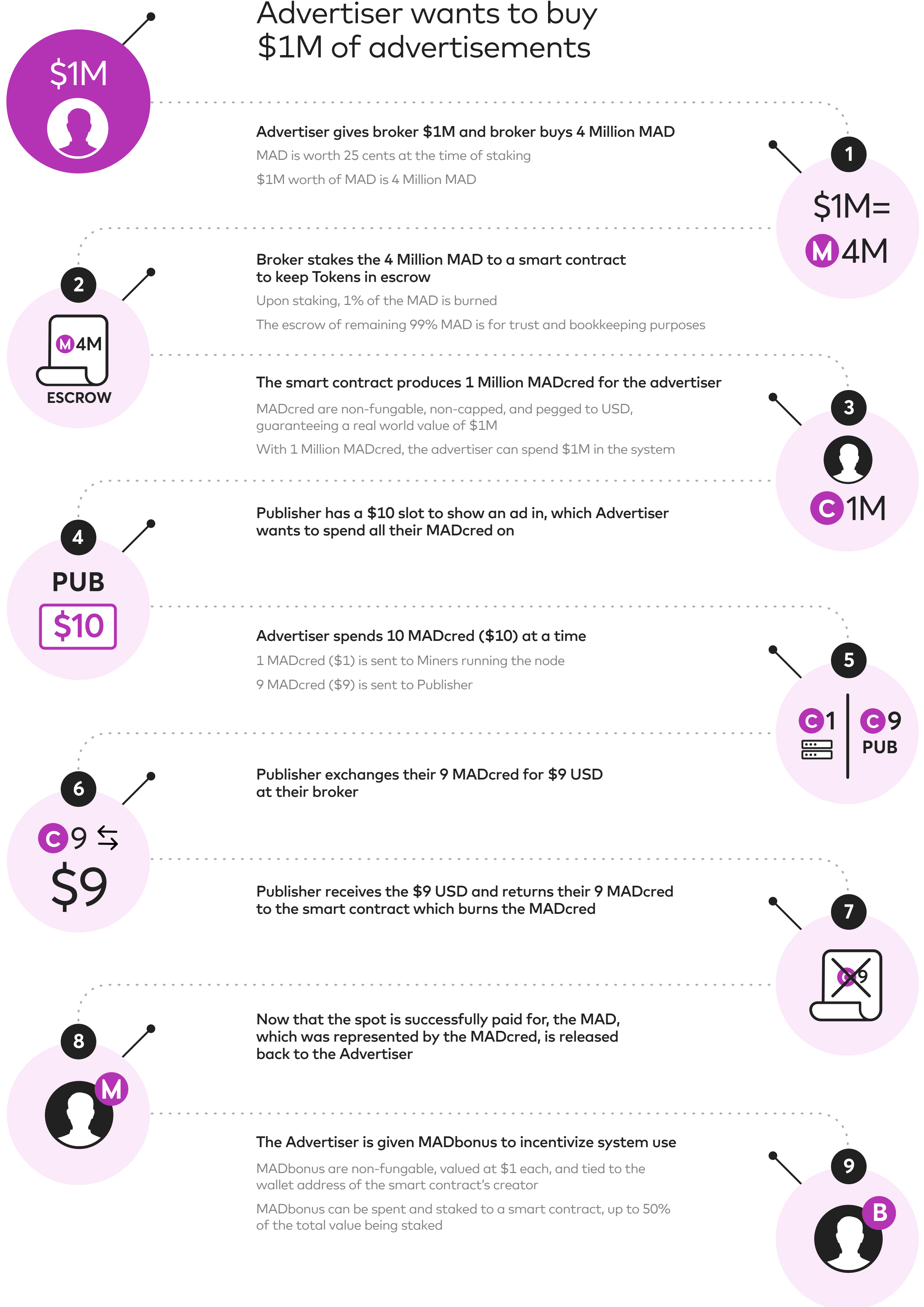
# Advertisers

# Publishers



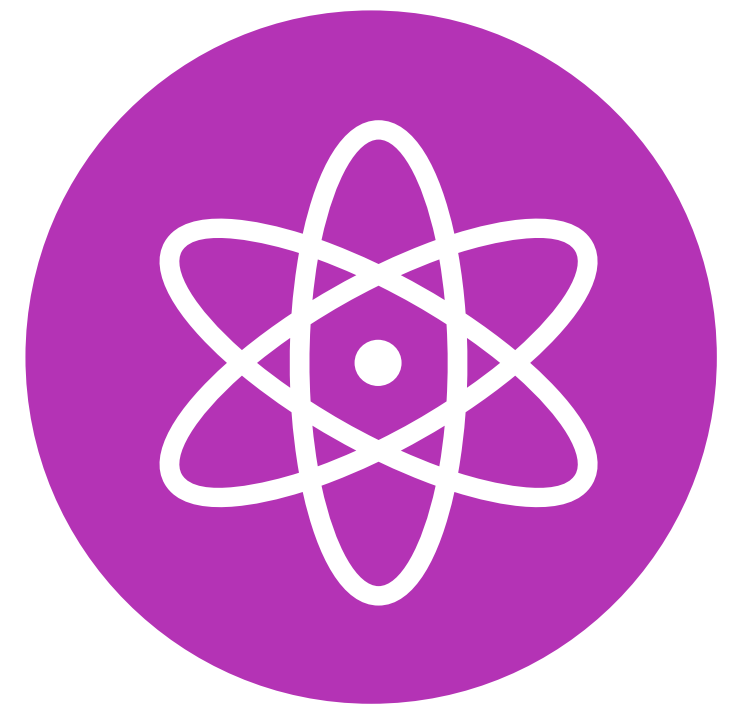
1a	Advertiser	Enters into agreement with broker to purchase a certain USD worth of advertising; the broker purchases MADtoken determined at the current price
1b	Broker	Broker informs advertisers of their commitment to pay fiat directly to publishers via wire transfer to reconcile their MADcred balance for ads served
2a	Broker	Broker takes MADtokens provided by advertisers or purchased on behalf of advertisers and places it in an escrow account in exchange for MADcred required to execute transactions
2b	Network	Network provides MADbonus to broker, which it can use to substitute for MADtoken when staking USD, to create an incentive for brokers to maintain a constant identity and be good actors; the network provides near-real-time visibility into transactions occurring and the balance of the MADcred accounts
3a	Network	Network transfers MADcred to seller account for financial value accumulated by transactions generated in the MAD Network advertising exchange
3b	Broker	Broker broadcasts publishers' inventory into the network to offer inventory to exchange
4a	Broker	Broker provides publisher with accounting of MADcred it's accumulated and tracks the fiat payment events that close the loop — reconciling with MADcred-based bookkeeping
4b	Publisher	Publisher provides broker with instructions regarding what inventory to publish on the exchange and the rules about how it can be used, including price floors
5a	Network	Network provides the miners with a share of all MADtoken accumulated
5b	Miner	Miners provide decentralized computation power (trust) to the network





## MADNET CORE

# Decentralized Ad Server and Exchange



MADnet Core is the ad server designed to execute buying and selling of advertising. MADnet Core will be powered by our proof-of-real-work algorithm, which combs through ad requests and campaigns to find fast feasible matches, maximizing throughput simultaneously ensuring campaigns deliver and inventory gets monetized. Feasible matches are defined as pairings of individual ad requests to campaigns that meet all publisher and advertiser rules including real time restrictions such as frequency caps and industry separation.

MADnet Core transactions are candidate matches and blocks are served when a sufficient number of matches are found. Serving a block indicates that the set of candidate matches has been validated by other nodes checking the rule set intersection. MADnet Core serving the block includes executing the orders corresponding to the match transactions with the publishers on behalf of the advertisers, validates that the ad was served, and keeps an audit trail of events on MADnet Books allowing for near-real-time feedback to both sides.

The MAD Network follows a proof-of-work protocol in which the cryptographic puzzle constituting “work” is replaced with a real-world task.

## Key Properties of “Work”:

A computational challenge is presented with the following properties:

- ◉ *It takes significant computational effort to find a solution*
- ◉ *It takes a comparatively trivial amount of effort to validate a solution once found*
- ◉ *There is a single parameter capable of modifying the difficulty so as to control block time*

The proposed “real work” takes the following form: Find N advertising-to-inventory matches, defined by the rule set intersection (see figure).



Due to high volumes of ad requests and campaigns running on the network, and the incredibly high cardinality of the rule sets, finding a match is hard. In the worst case, finding a match is a brute force challenge with complexity, bound to be determined by the large cardinalities. As “matching rates rise,” the number N of matches required to discover a block is increased, controlling difficulty and establishing expected block times. The critical property that makes “ad match finding” a valid puzzle for proof of work is the fact that verifying the rule set intersection is trivial compared to finding a match.

In the best case, smarter algorithms may uncover patterns allowing a node to estimate match likelihoods, allowing for faster mining (“matching”). Smart algorithms that “match” faster can be seen as analogous to the addition of GPUs to the Bitcoin ecosystem — here, the parameter N ramps significantly to control block times to the desired rate, but the difficulty feedback in the mechanism ensures that while innovations in matching algorithms may yield short-term boons to miners (“matchers”), the network will not lose its intended proof-of-work property as long as there is sufficient demand for advertising.



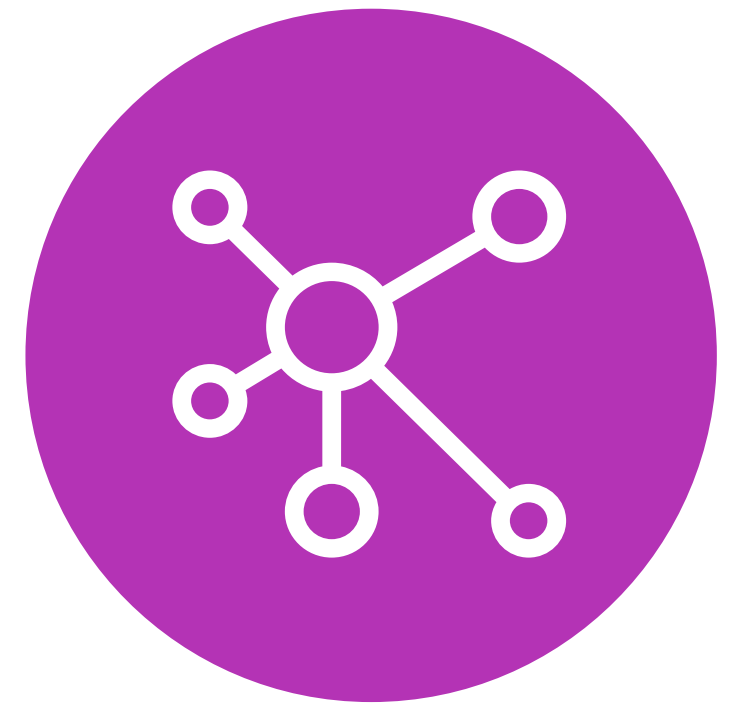
Note that the existing ad tech ecosystem currently serves millions of ads per second. An additional property of this solution is the fact that the matching incentives drive the system toward a state of being able to serve more ads per second with the same hardware, helping to ensure the network can scale to meet the demand of the ad tech ecosystem, and getting the auditability provided by blockchain governance, all without wasting energy on hashing computation.

The proof-of-real-work scheme is subject to the criticism that miners doing ‘real work’ may find incentives to take actions out of alignment with those of the advertisers and publishers. This is an area of active consideration but the MADnet Core is a consortium network and therefore the 51% attack sufficient to serve ads that fail to match the advertiser and publisher ruleset intersection would be a transparent and corrective measures would be handled at the level of the Adledger consortium.

Alternatively, nodes might find throughput efficiencies in ways that advertisers or publishers felt unfavorable; however, this can be addressed by adding additional rules to the publisher and advertiser rulesets to restrict the unfavorable matches from the feasible ruleset intersection. While practical implementation challenges are expected, incentives within the consortium are sufficiently well aligned to support proof-of-real-work for decentralized ad serving.

## MADNET DATA

# Decentralized Data Management Platform (DMP)



MADnet Data is a decentralized Data Management Platform (DMP) charged with the governance and accounting of data usage within the MADnet Core. Miners verifying matches between advertising campaigns and ad requests from publishers do so using 1st, 2nd and 3rd party data. MADnet Data provides data rights management ensuring that value add data providers contributions are accounted for and invoice-able via MADnet Books.

Existing data management platforms can connect with MADnet Core via an application programming interface (API) to provide targeted information for the serving of ads. This function will later be replaced by MADnet Data, an extension of MADnet Core and a decentralized DMP that captures information from the use of MAD Network and allows peers within the network to exchange information.

We are experimenting with the use of homomorphic encryption to power atomic data swaps for one-time-use data exchange. Impressions can ideally be served to a user without anyone knowing the true identity of a user or their information. This prevents third parties from taking data and selling it to competitors, and provides publishers with a vehicle to monetize their data without losing sole possession of it. This results in an efficient market for data exchange and allows for true price discovery of users, impressions and their associated data.

# CONCLUSION

The MAD Network is a direct response to the advertising industry's most pervasive problems, including supply chain opacity, data leakage and profit-seeking intermediaries. By allowing ad tech stakeholders to transact through an open blockchain network, the MAD Network will enable value to move freely and transparently. The MAD Network will not eliminate intermediaries entirely, but it will ensure that these intermediaries provide real value back to advertisers and publishers - each end of the ecosystem.

Each blockchain within the MAD Network will replace an existing legacy system. The ultimate goal is to craft solutions so that industry incumbents can comfortably embrace decentralized technologies. We are focusing our initial efforts on creating the backbone of any network, payments, to showcase how efficient blockchain systems can be. Once advertisers and publishers can exchange money through MADnet Books, we will build out decentralized servers and exchanges, effectively allowing ads to be matched autonomously via smart contracts. Decentralized data management platforms will give publishers a multitude of new ways to monetize their data in a private and secure manner.

The core objective of the MAD Network is to create an ecosystem of decentralized advertising tools that enable trustless transactions between advertisers and publishers. For publishers, this will mean more innovative opportunities to both utilize and monetize their data as well as establish new customer connections, while advertisers will be able to grow their brands and better understand their audiences.



# TOKEN SALE

The MADtoken serves several purposes:

- *Acts as a “software license” that activates a payment channel for the accounting, fulfillment and reconciliation of ad delivery*
- *Incentivizes participant behavior to be aligned with the benefit of the network*
- *Bootstraps the long-term development of the MAD Network*

The MADtoken is the exclusive way for network participants to access the features of MADnet Books, the decentralized payment rail powering the ecosystem. Advertisers stake the MADtoken in Insertion Orders, which are smart contracts that specify how ads should be executed. Each Insertion Order produces an equivalent amount of MADcred, the only acceptable payment method within the MAD Network.

The MADtoken is an ERC20-compatible token, meaning it will easily integrate with existing decentralized infrastructure including wallets, exchanges and smart contracts.

## USE OF FUNDS

R&D	50%
Platform	15%
Business Development	15%
Marketing	10%
Token Launch	5%
Legal	5%

## OVERVIEW

Symbol	MAD
Total Tokens	220,000,000
Price Per Token	\$0.40
Token Type	ERC20
Fundraising Goal	\$25,000,000
Implied Market Cap	\$88,000,000
Token Sale Date	December 14, 2017

# ADLEDGER CONSORTIUM

AdLedger is a consortium of advertising and publishing executives co-founded by MadHive, Tegna and IBM. The consortium's purpose is to bring transparency and data security to the ad tech supply chain by harnessing a blockchain-backed peer-to-peer network. Examples of tangible goals that this consortium will work to achieve are as follows:

- ◉ *Validate placements and transactions, ensuring brand safety through greater transparency*
- ◉ *Data portability using multisignature wallets and cryptographic keys for unduplicated campaign execution and measurement*
- ◉ *Remove layers of inefficiency in technology stacks to cure the disappearing ad dollar*
- ◉ *Cross-network identity management and attribution reporting*
- ◉ *Establish protocol around a decentralized peer-to-peer data sharing solution*

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## MAD TEAM



### Adam Helfgott, Project Lead

Adam is a CTO and serial tech entrepreneur. As the co-founder and CEO of MadHive, Adam conceptualizes and builds OTT ad tech with a blockchain architecture. Adam has worked directly on multiple blockchain projects and has held strategic advisory positions within several leading blockchain and media companies including Gem and IMG/WME.



### Tom Bollich, Lead Architect

Tom is an entrepreneur in the technology space, particularly in “gamification of economies.” Before advising various Fortune 500 companies on “gamification,” he was a founding team member and studio CTO at Zynga. Tom has been at the forefront of many disruptive trends we now see as commonplace, including gamification, online casinos, real-time labor and even cannabis.



### Konstantin Richter, Token Strategist

A serial entrepreneur in the SaaS media space, Konstantin is an advisor to leading blockchain companies like Gem, ShoCard and Po.et. He is the co-chair of the advertising consortium AdLedger and CEO of Blockdaemon.



### Chris Powers, Project Manager

Chris is a vice president at BTC Labs, a venture studio building a suite of decentralized applications for forward-thinking media companies. He previously spent eight years in Shanghai consulting for investment banks and mutual funds on the Chinese capital markets before joining ICOAGE, the world’s largest ICO platform, as Director of International Markets.



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- (a) not a Qualified Person, where "Qualified Person" means (i) an "Accredited Investor" as defined in Rule 501(a) of Regulation D under the U.S. Securities Act of 1933, and has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of the purchase of Tokens to be made by such person hereunder, or (ii) a person that is not a "U.S. Person" as defined in Rule 902(k) of Regulation S under the U.S. Securities Act of 1933;
- (b) located in the Republic of Singapore or the People's Republic of China ("PRC"), at the time of your intended purchase/purchase of MADtokens in the Token Sale;
- (c) a citizen, domiciled in, or resident of the Republic of Singapore or an entity incorporated under the laws of Singapore; or
- (d) a citizen, domiciled in, or resident of the PRC or an entity incorporated under the laws of the PRC, (collectively, "Excluded Persons")

No MADtoken should be construed, interpreted, classified or treated as enabling, or according any opportunity to, purchasers to participate in or receive profits, income, or other payments or returns arising from or in connection with the MADtokens or the proceeds of the initial token sale (“ITS”), or to receive sums paid out of such profits, income, or other payments or returns.

No person is bound to enter into any contract or binding legal commitment in relation to the sale and purchase of the MADtokens, and no cryptocurrency or other form of payment is to be accepted on the basis of this Whitepaper.

Any agreement as between MAD Technologies and you as a purchaser, and in relation to any sale and purchase, of MADtokens is to be governed by only a separate document setting out the terms and conditions (the “T&Cs”) of such agreement. In the event of any inconsistencies between the T&Cs and this Whitepaper, the former shall prevail.

There are risks and uncertainties associated with MAD Technologies and its business and operations, the MADtokens, the MAD Network and the ITS. Please refer to the section entitled “Risks and Uncertainties” set out at the end of this Whitepaper.

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#### REPRESENTATIONS AND WARRANTIES BY YOU

By accessing and/or accepting possession of any information in this Whitepaper or such part thereof (as the case may be), you represent and warrant to MAD Technologies as follows:

- (a) you agree and acknowledge that the MADtokens do not constitute securities of any form, units in a business trust, units in a collective investment scheme or any other form of regulated investment or investment product in any jurisdiction;
- (b) you are not an Excluded Person, or a citizen or resident of a country the laws of which prohibit or conflict with the ITS or your participation in the ITS;

- (c) you agree and acknowledge that this Whitepaper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities of any form, units in a business trust, units in a collective investment scheme or any other form of regulated investment or investment product in any jurisdiction, or a solicitation for any form of regulated investment or investment product, and you are not bound to enter into any contract or binding legal commitment and no cryptocurrency or other form of payment is to be accepted on the basis of this Whitepaper;
- (d) you acknowledge and understand that no MADtoken should be construed, interpreted, classified or treated as enabling, or according any opportunity to, MADtoken holders to participate in or receive profits, income, or other payments or returns arising from or in connection with the MADtokens or the proceeds of the ITS, or to receive sums paid out of such profits, income, or other payments or returns;
- (e) you agree and acknowledge that no regulatory authority has examined or approved of the information set out in this Whitepaper, no action has been or will be taken by MAD Technologies to obtain such approval under the laws, regulatory requirements or rules of any jurisdiction and the publication, distribution or dissemination of this Whitepaper to you does not imply that the applicable laws, regulatory requirements or rules have been complied with;
- (f) you agree and acknowledge that this Whitepaper, the undertaking and/or the completion of the ITS, or future trading of MADtokens on any cryptocurrency exchange, shall not be construed, interpreted or deemed by you as an indication of the merits of MAD Technologies, the MADtokens, the ITS, and the MAD Network;
- (g) the distribution or dissemination of this Whitepaper, any part thereof or any copy thereof, or acceptance of the same by you, is not prohibited or restricted by the applicable laws, regulations or rules in your jurisdiction, and where any restrictions in relation to possession are applicable, you have observed and complied with all such restrictions at your own expense and without liability to MAD Technologies;
- (h) You agree and acknowledge that in the case where you wish to purchase any MADtokens, MADtokens are not to be construed, interpreted, classified or treated as:
  - (i) any kind of currency other than cryptocurrency;
  - (ii) debentures, stocks or shares issued by any person or entity;
  - (iii) rights, options or derivatives in respect of such debentures, stocks or shares;
  - (iv) rights under a contract for differences or under any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss;
  - (v) securities;
  - (vi) units or derivatives of units in a business trust;
  - (vii) units in a collective investment scheme; or
  - (viii) any form of regulated investment or investment product;



- (i) you are fully aware of and understand that you are not eligible and you are not to purchase any MADtokens if you are an Excluded Person;
- (j) you are legally permitted to participate in the ITS and all actions contemplated or associated with such purchase, including the holding and use of MADtokens;
- (k) the amounts that you use to purchase MADtokens were not and are not directly or indirectly derived from any activities that contravene the laws and regulations of any jurisdiction, including anti-money laundering laws and regulations;
- (l) if you are a natural person, you are of sufficient age and capacity under the applicable laws of the jurisdiction in which you reside and the jurisdiction of which you are a citizen to participate in the ITS;
- (m) you are not obtaining or using MADtokens for any illegal purpose;
- (n) none of: (i) you; (ii) any person controlling or controlled by you; (iii) if you are a privately-held entity, any person having a beneficial interest in you; or (iv) any person for whom you are acting as agent or nominee in connection with this ITS is a senior foreign political figure, or any immediate family member or close associate of a senior foreign political figure. A “senior foreign political figure” is defined as a senior official in the executive, legislative, administrative, military or judicial branch of a government (whether elected or not), a senior official of a major political party, or a senior executive of a foreign government-owned corporation, and includes any corporation, business or other entity that has been formed by, or for the benefit of, a senior foreign political figure. “Immediate family” of a senior foreign political figure typically includes such figure’s parents, siblings, spouse, children and in-laws. A “close associate” of a senior foreign political figure is a person who is widely and publicly known to maintain an unusually close relationship with such senior foreign political figure, and includes a person who is in a position to conduct substantial domestic and international financial transactions on behalf of such senior foreign political figure;
- (o) if you are affiliated with a non-U.S. banking institution (“Foreign Bank”), or if you receive deposits from, make payments on behalf of, or handle other financial transactions related to a Foreign Bank, you represent and warrant to MAD Technologies that: (i) the Foreign Bank has a fixed address, and not solely an electronic address, in a country in which the Foreign Bank is authorized to conduct banking activities; (ii) the Foreign Bank maintains operating records related to its banking activities; (iii) the Foreign Bank is subject to inspection by the banking authority that licensed the Foreign Bank to conduct its banking activities; and (iv) the Foreign Bank does not provide banking services to any other Foreign Bank that does not have a physical presence in any country and that is not a regulated affiliate;
- (p) you have a basic degree of understanding of the operation, functionality, usage, storage, transmission mechanisms and other material characteristics of cryptocurrencies, blockchain-based software systems, cryptocurrency wallets or other related token storage mechanisms, blockchain technology and smart contract technology;
- (q) you are fully aware and understand that in the case where you wish to purchase any MADtokens, there are risks associated with MAD Technologies and its businesses and operations, MADtokens, the MAD Network and the ITS;
- (r) you bear the sole responsibility to determine what tax implications purchasing MADtokens may have for you and agree not to hold MAD Technologies or any other person involved in the ITS liable for any tax liability associated with or arising therefrom;

- (s) you agree and acknowledge that MAD Technologies is not liable for any direct, indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this Whitepaper or any part thereof by you;
- (t) you waive the right to participate in a class action lawsuit or a class wide arbitration against MAD Technologies and/or any person involved in the ITS and/or with the creation and distribution of MADtokens; and
- (u) all of the above representations and warranties are true, complete, accurate and non-misleading from the time of your access to and/or acceptance of possession this Whitepaper or such part thereof (as the case may be).

#### CAUTIONARY NOTE ON FORWARD-LOOKING STATEMENTS

All statements contained in this Whitepaper, statements made in press releases or in any place accessible by the public and oral statements that may be made by MAD Technologies or its directors, executive officers or employees acting on behalf of MAD Technologies (as the case may be), that are not statements of historical fact, constitute “forward-looking statements”. Some of these statements can be identified by forward-looking terms such as “aim”, “target”, “anticipate”, “believe”, “could”, “estimate”, “expect”, “if”, “intend”, “may”, “plan”, “possible”, “probable”, “project”, “should”, “would”, “will” or other similar terms. However, these terms are not the exclusive means of identifying forward-looking statements. All statements regarding MAD Technologies’ business strategies, plans and prospects and the future prospects of the industry which MAD Technologies is in are forward-looking statements. These forward-looking statements, including but not limited to statements as to MAD Technologies’ prospects, future plans, other expected industry trends and other matters discussed in this Whitepaper regarding MAD Technologies are matters that are not historic facts, but only predictions.

These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual future results, performance or achievements of MAD Technologies to be materially different from any future results, performance or achievements expected, expressed or implied by such forward-looking statements. These factors include, amongst others:

- (a) changes in political, social, economic and stock or cryptocurrency market conditions, and the regulatory environment in the countries in which MAD Technologies conducts its business and operations;
- (b) the risk that MAD Technologies may be unable to execute or implement its business strategies and future plans;
- (c) changes in interest rates and exchange rates of fiat currencies and cryptocurrencies;
- (d) changes in the anticipated growth strategies and expected internal growth of MAD Technologies and the MAD Network;
- (e) changes in the availability and fees payable to MAD Technologies in connection with its businesses and operations or on the MAD Network;
- (f) changes in the availability and salaries of employees who are required by MAD Technologies to operate their respective businesses and operations;
- (g) changes in preferences of users of the MAD Network;
- (h) changes in competitive conditions under which MAD Technologies operates, and the ability of MAD Technologies to compete under such conditions;

- (i) changes in the future capital needs of MAD Technologies and the availability of financing and capital to fund such needs;
- (j) war or acts of international or domestic terrorism;
- (k) occurrences of catastrophic events, natural disasters and acts of God that affect the businesses and/or operations of MAD Technologies;
- (l) other factors beyond the control of MAD Technologies; and
- (m) any risk and uncertainties associated with MAD Technologies and its business and operations, the MADtokens, the MAD Network and the ITS.

All forward-looking statements made by or attributable to MAD Technologies or persons acting on behalf of MAD Technologies are expressly qualified in their entirety by such factors. Given that risks and uncertainties that may cause the actual future results, performance or achievements of MAD Technologies to be materially different from that expected, expressed or implied by the forward-looking statements in this Whitepaper, undue reliance must not be placed on these statements. These forward-looking statements are applicable only as of the date of this Whitepaper.

Neither MAD Technologies nor any other person represents, warrants and/or undertakes that the actual future results, performance or achievements of MAD Technologies will be as discussed in those forward-looking statements. The actual results, performance or achievements of MAD Technologies may differ materially from those anticipated in these forward-looking statements.

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#### TERMS USED

To facilitate a better understanding of the MADtokens being offered for purchase by MAD Technologies, and the businesses and operations of MAD Technologies, certain technical terms and abbreviations, as well as, in certain instances, their descriptions, have been used in this Whitepaper.



These descriptions and assigned meanings should not be treated as being definitive of their meanings and may not correspond to standard industry meanings or usage.

Words importing the singular shall, where applicable, include the plural and vice versa and words importing the masculine gender shall, where applicable, include the feminine and neuter genders and vice versa. References to persons shall include corporations.

#### NO ADVICE

No information in this Whitepaper should be considered to be business, legal, financial or tax advice regarding MAD Technologies, the MADtokens, the MAD Network, or the ITS. You should consult your own legal, financial, tax or other professional advisor regarding MAD Technologies and its business and operations, the MADtokens, the MAD Network, and the ITS. You should be aware that you may be required to bear the financial risk of any exchange for of MADtokens for an indefinite period of time.

#### NO FURTHER INFORMATION OR UPDATE

No person has been or is authorised to give any information or representation not contained in this Whitepaper in connection with MAD Technologies and its business and operations, the MADtokens, the MAD Network, or the ITS and, if given, such information or representation must not be relied upon as having been authorised by or on behalf of MAD Technologies. The ITS shall not, under any circumstances, constitute a continuing representation or create any suggestion or implication that there has been no change, or development reasonably likely to involve a material change in the affairs, conditions and prospects of MAD Technologies or in any statement of fact or information contained in this Whitepaper since the date hereof.

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#### RISKS AND UNCERTAINTIES

Prospective purchasers of MADtokens should carefully consider and evaluate all risks and uncertainties associated with MAD Technologies and its business and operations, the MADtokens, the MAD Network, and the ITS, and all information set out in this Whitepaper and the T&Cs prior to any purchase of the MADtokens. If any of such risks and uncertainties develops into actual events, the business, financial condition, results of operations and prospects of MAD Technologies could be materially and adversely affected. In such cases, you may lose all or part of the value of the MADtokens.

# ADDENDUM

Leveraging MadHive's status as the largest premium OTT ad buyer in the world, the MAD Network has a realistic path for quick adoption. The road to mainstream disruption begins with television.

The MAD Network's ultimate goal is to build a decentralized infrastructure for programmatic advertising. To attain this goal, the MAD Network must first prove its efficacy by carving out a niche.

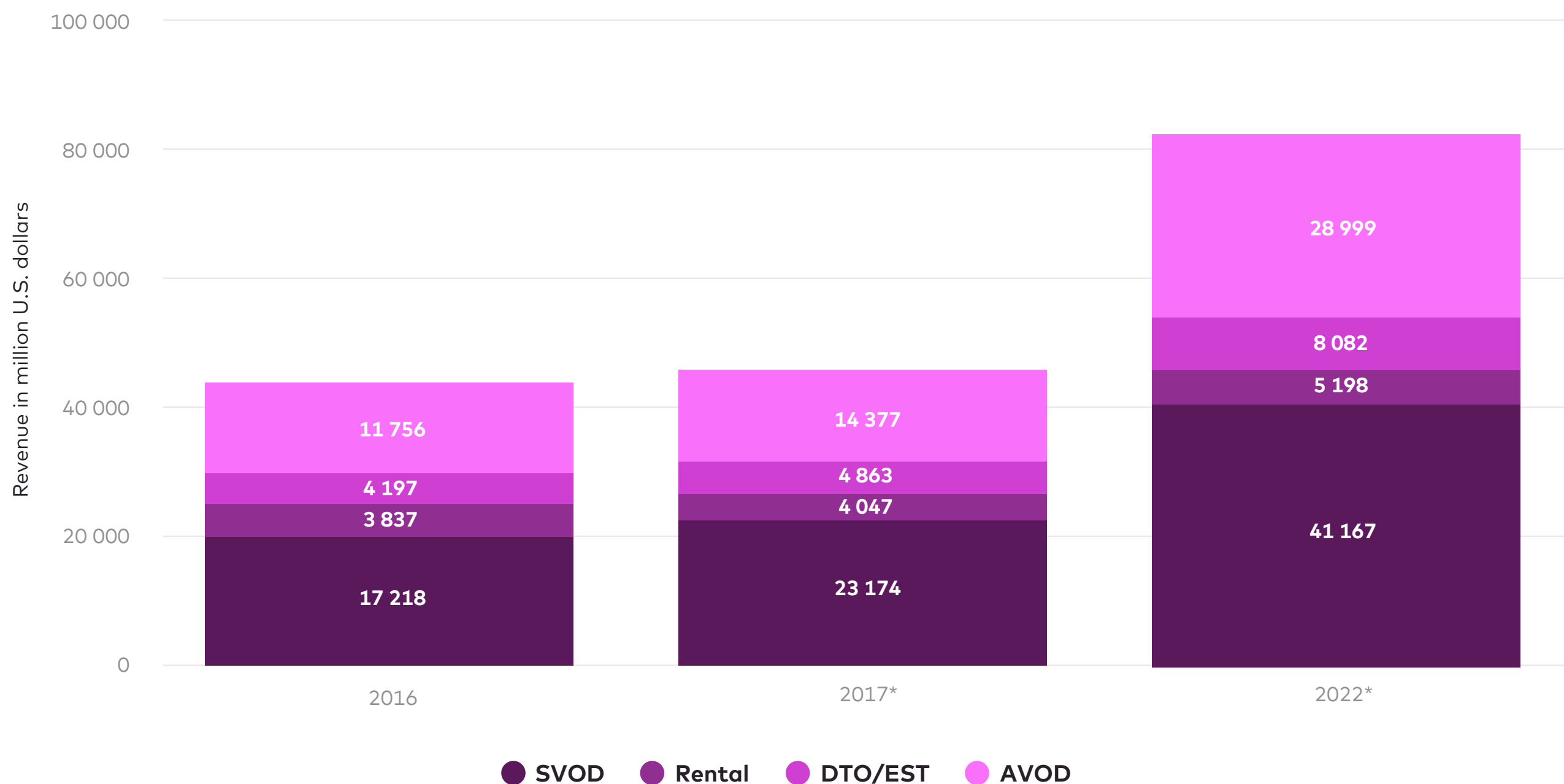
## Go to Market Strategy

The MAD strategy focuses on a TV-First rollout, beginning with regional and local advanced television (\$18B/yr market), where MadHive™ already has traction through 46 television stations in 38 markets. Within 2 years, MAD plans to expand to national sales for both digital and linear television.

- Step 1
  - ◉ *Regional and Local Digital television (\$13 billion industry/yr in USA)*
  - ◉ *MadHive already has traction through 46 tv stations in 38 markets*
- Step 2
  - ◉ *Regional and Local Linear television*
- Step 3
  - ◉ *National digital television*
- Step 4
  - ◉ *Digital reach extension*

## Why is the MAD Network going after OTT and TV first?

To start, OTT advertising and TV are rapidly growing markets. In 2022, the forecast for OTT and TV ad revenue is over \$80 billion, up from just under \$38 billion in 2016.



Over-the-top (OTT) TV and video revenue worldwide from 2016 to 2022, by source (in million U.S. dollars)

An OTT application is any app or service that provides a product over the internet and bypasses traditional distribution; Hulu, Apple TV, and YouTube are prime examples. OTT and TV ads consist mostly of high-end premium video, making it a very lucrative market. The MAD Network is designed to cater to the needs of OTT and TV advertisers and publishers.

Furthermore, premium OTT video accounts for only 10% of all ad inventory, but commands 40% of all ad spend. This means OTT and TV inventory provide a lot of value for advertisers. Our goal is to protect the high end video stakeholders from the duopoly of Facebook and Google by providing them an alternative.

Both Facebook and Google have yet to conquer the premium long form video market. Their absence leaves a void that the MAD Network and MadHive can fill together. MadHive's high-end video presence combined with Facebook and Google's absence put the MAD Network in a prime position to capture a sizable high-end video marketshare.

## Conclusion

The MAD Network team aims to improve an already profitable ad tech company, MadHive, by constructing a decentralized infrastructure for programmatic advertising. By going after a niche and lucrative market, the MAD Network will be able to gain early traction for fast adoption and prove that blockchain technology is a viable solution to many of the problems in digital advertising.