

DECENTRALIZED FACIAL RECOGNITION DIGITAL BILLBOARDS

WHITEPAPER



Female

Age: 30

Hair: Black

Emotion: Happy

Dress: Pink





“...of my 20+ IPO’s this is so far my most exciting and unique venture”

Michael Edelson - Director at Manchester United & Chairman of Bidooh

“...this is what the audience voted for last night, this is the future of advertising”

His Royal Highness Prince Andrew



“...this is like the Pokemon of advertising”

Max Keiser – Broadcaster, Film-Maker, Partner in Crypto VC Fund @HeisenbergCap



“I feel passionate about this project because I’ve been in the space for so long and I know the potential of it”

Steve McGarry – YouTuber @HackCrypto, Investor & Author



Table of Contents

EXECUTIVE SUMMARY.....	7
What is Bidooh?	7
The market and problem	7
A unique opportunity	7
THE OPPORTUNITY	11
How billboard advertising works	11
Advertiser’s dilemma	12
Slow to deploy	13
Lack of transparency	14
Advertising occupancy.....	14
THE BIDOOH SOLUTION	15
How Bidooh works	15
Google Adwords as a concept for outdoor	16
Available to everyone	16
Simplifying outdoor advertising	17
It’s all online	17
Solving ad delivery reporting.....	17
Real-time, real audience data.....	18
Ready to compete with online advertising.....	18
Demographics.....	19
Scalable to millions of screens	19
Display and impression based pricing.....	20
Fixed vs biddable space.....	20
Budget based delivery	20
Re-marketing delivery, sequential delivery of ads	21
Billboard ROI.....	21
MARKET	22
Target markets	22
Market size	22
Awards	23
Trial	23
Investments	24
PARTNERS	25
GLOBAL GROWTH STRATEGY	26
Growth Summary	26

Growth Challenges.....	26
ADVERTISER GROWTH STRATEGY	27
On-boarding & retentions.....	27
Direct telesales	27
Field sales	28
Media agencies.....	28
SCREEN NETWORK GROWTH STRATEGY	28
Own network	28
Partner operators – existing screen networks	28
Token-holders network	29
Channel partners - solutions and hardware suppliers.....	29
Country-level partners.....	29
Screen manufacturers	29
Screen casing manufacturers	30
Bidooh box & software download.....	30
Growth by acquisition.....	30
Demand Side Platform (DSP) Integration.....	30
TOKEN ECONOMICS	31
Blockchain use case & token use	31
Token Sale Summary	32
Unsold tokens	33
Token split and allocation	33
Funding allocation	33
Token benefits.....	34
DOOH token value	35
TOKEN USAGE.....	36
Buy digital billboard screen adverts	36
Earn tokens seeing ads	36
Redeem tokens	36
Freelancer token community	37
Crowdsourcing administrators	37
Social media integration	37
Brand Scan	37
App SDK	38
Billboard App Store	38
PRODUCT	40
Bidooh Platform	40

Ad Creation	40
Ad Upload.....	41
Ad Preview.....	41
Mobile App	44
Ad Preview.....	44
Monitoring platform	45
Management Dashboard	47
Demographics dashboard: Age	47
Demographics dashboard: Appearance.....	48
Footfall dashboard	48
Security & user privacy	49
Patents pending	49
Open API (Application Programming Interface)	50
Technology partnerships.....	50
THE BIDOOH STORY	53
Seeing is believing	53
Awards	56
Trial	56
Investments	56
Our Vision	57
TEAM BIDOOH	58
Team	58
Advisors	64
PRESS / MEDIA	65
Partners	65
FURTHER READING	67
Links	67
References.....	67
DISCLAIMER	68
Director's Responsibility Statement	68
Summary of Legal Considerations, Risks and Disclaimers	68

WHAT IS BIDOOH?

10 things you need to know about Bidooh

1

What is it? A mobile app that allows you to publish adverts to digital billboards¹³



2

Manchester United Non-Exec Director, Michael Edelson is Chairman of Bidooh

3

You can buy screens and be part of Bidooh's decentralized digital billboard network



4

Bidooh is like Google Adwords¹ but for digital billboards – publish ads in 60 seconds

5

iPhone app, iPad app is built and web prototype is working on portal.bidooh.com



6

Consumers earn tokens for seeing digital ads getting rewarded for their attention¹²

7

Consumers to redeem tokens at future participating retailers and restaurants²



8

31 trial digital screens live across 15 locations across Europe

9

Contract signed for 2,000 screens being rolled out by Czech (European) partner



10

One token is equal to one advert on a digital screen (normally 10 seconds)

EXECUTIVE SUMMARY

What is Bidooh?

Bidooh is the world's first facial recognition billboard on the blockchain. It delivers targeted advertising based on who they are and what they wear. Bidooh displays the right message to the right person at the right time, all controlled from an app in real-time.

"This is the future of advertising"

His Royal Highness Prince Andrew, Windsor Castle, Pitch@Palace



The market and problem

Digital out-of-home advertising (DOOH) is growing at a phenomenal rate. The global billboard (OOH) market is currently worth around \$34.8bn per annum⁴ and is predicted to grow to \$45.46bn¹⁴ by 2021. For the sector, this demonstrates unprecedented growth rate - significantly higher than the 4% for traditional media.

Exciting as this is, the market continues to suffer from historic challenges that impact advertisers, publishers and consumers alike. Of these challenges, the most often criticized are; the costs borne by advertisers due to too many middlemen; misleading information of targeting efficiency; slow speed to market; and ease of fraud.

A unique opportunity

Bidooh has developed its own intelligent and automated digital billboard advertising platform built in the cloud that will leverage blockchain technology to address each of these challenges and more. Now, for the first time, advertisers, publishers and consumers can all benefit from a truly global and accessible digital advertising platform. We call it [Decentralized Digital Billboards](#).

Developed, proven and already at minimum viable product (MVP) stage and live on bidooh.com, the Bidooh platform enables advertisers to buy, upload and manage their own digital advertising in 10 second increments on any Bidooh supported publisher billboard screen anywhere in the world.

Using either desktop and mobile devices, advertisers will be able to accomplish this process in minutes with the added benefit of selecting or reporting on key demographics including; age, gender, beard/moustache, sunglasses/glasses, number of visits, visit duration, brand recognition, colors, hair color, clothing color and type, value per visit, average dwell time, stores visited, group type, height, body shape, ethnicity and emotion.

Publishers can quickly take advantage of the Bidooh platform by installing Bidooh screens at their chosen locations. Where existing screens and infrastructure already exist, an easy to install, low-cost Bidooh box can be provisioned. Both solutions enable publishers immediate access to Bidooh's global community and reach.



Commercially, this direct-to-advertiser approach removes most of the costly intermediaries involved in the traditional advertising journey, creating a better value proposition for both the advertiser and the publisher.

Blockchain use case

To enable complete transparency on the platform, Bidooh proposes to write all impression and view data onto the blockchain. When an advert is displayed on a screen, the time-stamp and information will be written to the blockchain. Similarly, when the computer vision cameras within the billboard screen see people looking at the advert, that information will also be stored on the blockchain ensuring that advertisers can be certain that their adverts are being displayed and seen in real-time.

This process adds a greater level of information transparency that goes beyond traditional footfall counters and stores additional demographic information. The Bidooh platform eliminates the historical reliance of trust, delayed or inaccurate reporting. This approach to storing the impression data on an open digital ledger will be truly disruptive.

A new advertising currency

Introducing the Bidooh (DOOH) token: A single 10 second advertising space on a digital advertising screen.

Whilst traditional fiat payment methods can still be used, the Bidooh token allows the platform to operate more efficiently on a global scale. Advertisers, media agencies and new or existing screen-owners can join the network to create the world's first truly global network without borders under a single token.

Primary DOOH token uses will be:

1. **Access:** Buy advertising space in real-time
2. **Reward:** Get rewarded with tokens for vetting the quality of the adverts
3. **Engagement:** Tokens for seeing adverts and engaging with adverts (app users)
4. **Spend:** To spend tokens at selected retailers
5. **Earn:** Freelancers earn tokens for graphics/copywriting/translation work

The token is 28 times cheaper to buy during the ICO than to buy advertising space through normal channels (fiat). The cost of 2000 tokens is \$1 USD and pays for \$28 USD of advertising on our screens - which cost 1.4 cents for a 10-second advert.

Bidooh is an investment of and chaired by Michael Edelson, a director of Manchester United Football Club and VC responsible for over 20 companies on the stock market, two of which reached over \$1bn. Bidooh has a dedicated in-house team of experts and specialists spanning advertising, marketing, programming and blockchain. We have created a unique and revolutionary out-of-home advertising platform that satisfies the modern needs of both advertisers and publishers and brings this old medium fully into the always-on, global digital age.

The Bidooh ICO is comprised of the following token economics:



The infographic features a dark blue background with a network of white nodes and lines. At the top center, the text 'AVAILABLE TOKENS' is written in a light blue font, with a small icon of two overlapping circles above it. Below this, the number '126 000 000 000' is displayed in large white font, separated from the rest of the content by a horizontal white line. Below the line, there are four key metrics: 'TOKEN NAME' (DOOH), 'UNIT PRICE' (1 = \$0.0005), 'MIN. PURCHASE' (\$100 USD), 'SOFT CAP' (\$5 000 000), and 'HARD CAP' (\$25 000 000). At the bottom, the text 'Payment Methods: Ethereum, Bitcoin, Litecoin, Bitcoin Cash, Stellar Lumens.' is written in white.

AVAILABLE TOKENS

126 000 000 000

TOKEN NAME	UNIT PRICE	MIN. PURCHASE
DOOH	1 = \$0.0005	\$100 USD
SOFT CAP		HARD CAP
\$5 000 000		\$25 000 000

Payment Methods: Ethereum, Bitcoin, Litecoin, Bitcoin Cash, Stellar Lumens.

*Conversion rates will apply in USD on the date of transfer using cryptocompare.com or xe.com.

THE OPPORTUNITY

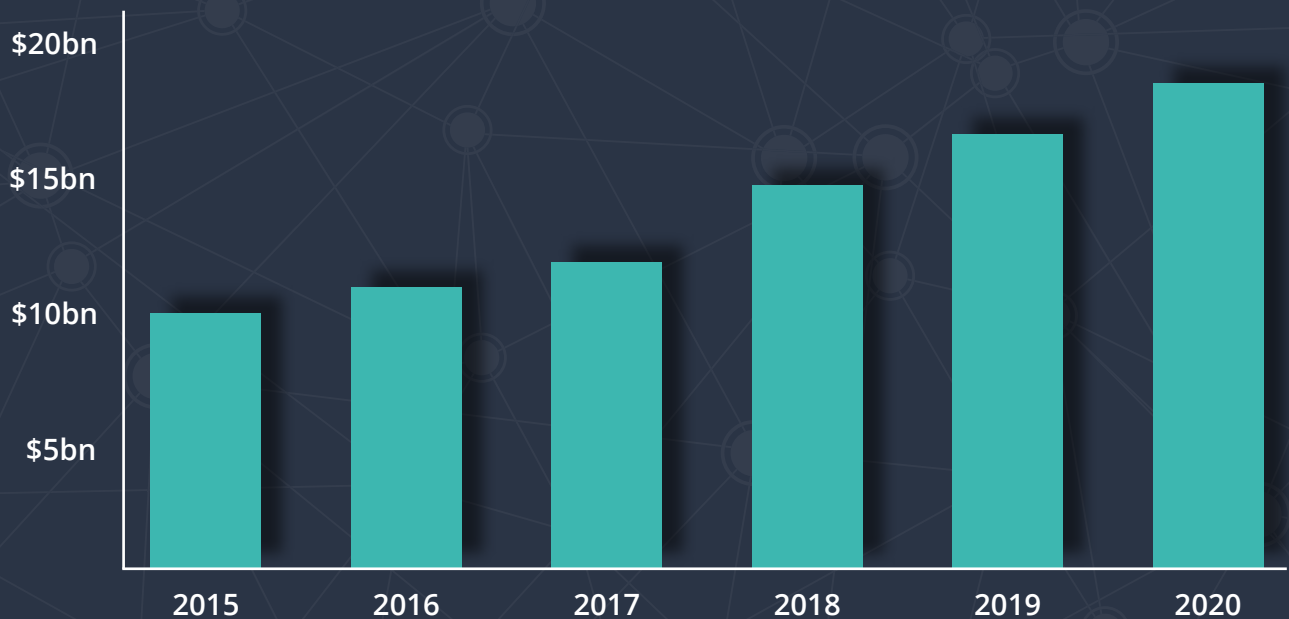
How billboard advertising works

Billboard advertising is one of the oldest ways to advertise. You will most probably see outdoor advertising posters of all sizes on your way to work, in a shopping center, at airports, train and bus stations.

Billboard advertising is known as “Out-of-Home” or OOH while the digital billboard market is called “Digital-out-of-Home” or DOOH when it’s using digital screens to show the advertising.

It is still considered one of the most impactful advertising methods for broadcast advertising.

DOOH annual market growth forecast



Source: PWC, Ovum

“DOOH net advertising revenues will grow by +16% this year to reach \$5.7 billion as new airports, malls and transport system become available for media buying this year.”

Source: Magna Global 2018

Advertiser's dilemma

Advertisers are faced with big challenges of accessibility and accountability when choosing outdoor advertising.

The advertiser's DOOH dilemma



These start from attempting to book outdoor advertising. Current routes to advertising fall into three common categories:

- Using traditional media/network agencies
- Via programmatic agencies
- Direct via publisher

The industry still operates mostly by relationships, telephone and email. Advertisers or their agencies still call to find, plan and negotiate available spaces and rates. And even when booked, tracking creatives at various sizes, paying for the ads and receiving invoices is labour intensive.

This cumbersome booking, delivery and payment process results in two things:

- Advertising costs are high
- Minimum term contracts are required

Typical advertiser engagement journey



These two factors can put off or price out many advertisers. This means the industry is missing out on a) a huge market for growth and b) acquisition of new clientele.

Slow to deploy

In today's advertising world, speed is of the essence. Businesses need to respond ever faster in the market and the digital world is key to enabling this. However, in the worlds of OOH and DOOH, very little has changed in decades. Advertising is still required to be booked weeks or even months in advance, using delay-heavy processes of phone calls and email.

This is unattractive to advertisers needing to respond quickly to changing markets and behaviours where advert rotation needs to be rapid or immediate. Due to this inherent slow process, marketers prefer to use other mediums such as online and mobile to drive their message out more quickly.

A more direct alternative is needed where advertisers and marketers can deploy advertisements instantly over digital screens from an easily accessible platform. Such a capability will have a game-changing impact on the whole market.

Lack of transparency

Advertising is typically based on footfall figures, which are sampled periodically, and are by their nature difficult to authenticate. They rely on a 'person counting' system which can be inaccurate and full of out-of-date information. Specifically, these systems do not show who has actually seen the ad, as a proportion of passers by, or their gender or age etc., making much of the data meaningless.

The number of times a screen has displayed adverts is called a 'play-out report'. These reports are typically provided in either Excel or PDF format and not available in real-time. Not only is the information provided limited in its insight, it is also a time-delayed report of the data captured. Digital advertisers on the other hand are used to receiving real-time data, on dashboards with analytic capabilities. They are able to see how their advertising campaigns are performing in real-time and react accordingly.

Digital out-of-home (DOOH) must inevitably move this way to enable smarter decision making and better optimization for customers. Such a shift would further increase the DOOH spend of advertisers and marketers.

Advertising occupancy

Digital out-of-home (DOOH) advertising signage occupancy is variable. This means there may not be enough advertisers to fill the space on the screens all of the time. There are many reasons why this happens, but the most common are due to expensive and lengthy contracts.

However, the story is different with digital advertising. Google Adwords disrupted the space by taking away contractual lengths and minimum spend and instead distributing the available space between all the contending advertisers.

The outdoor market can no longer ignore this new dynamic format of advertising but has, to date, been held back by technological challenges to enable it. No longer. Bidooh is the solution.

THE BIDOOH SOLUTION

How Bidooh works

Bidooh is an end-to-end solution that makes digital billboard advertising simple and accessible to all.

Any advertiser can simply download the Bidooh app (or visit the Bidooh portal), create an advert, choose a location, set a budget and press the Publish button. Their advert then goes through a lightning-fast approval process and is uploaded to their selected screen in real-time.

Bidooh end-to-end digital advertising



'It's like Google Adwords for the digital billboard world.'

Bidooh screens can be deployed and installed as a complete all-in-one solution to any publisher location and are immediately part of the Bidooh global advertising network. Existing screen owners simply need to plug in one of our 'Bidooh boxes' to their existing screens (via HDMI) to become a part of the platform. Advertisers and media agencies can then access and publish adverts on those screens within seconds of joining.

Google Adwords as a concept for outdoor

The Bidooh publishing concept was modelled on the Google Adwords¹ and Facebook Ads⁷ platform.

One of the most attractive features which enabled micro-advertisers to engage with Google and Facebook was to make advertising much more accessible by removing minimum spends, minimum term contracts and providing the opportunity for advertisers to buy space in small increments. We've taken this philosophy and applied it to the Bidooh publishing platform, making it fit-for-purpose for the world of outdoor advertising.

Another key facet of both Google and Facebook is their ability to create adverts simply and quickly. During our trial, we learnt that more than 70%⁸ of smaller businesses don't have immediate or affordable access to graphic designers, creating a major barrier to entry to publishing outdoor advertising. We have developed an easy-to-use template based ad-builder which allows anyone to create effective, eye-catching poster designs without the direct need of outside creative resources. This greatly streamlines the on-boarding process and maximizes both user adoption and conversion.

Development of the ad-builder continues onward with future releases to include pre-designed templates and layouts, millions of stock photos to choose from and pre-designed text block styles. Advertisers of all sizes and abilities will be able to instantly build professional-looking designs and immediately upload them to the network.

Available to everyone

One core objective has been to ensure that smaller advertisers and businesses can be on the same level playing field as their bigger competitors and benefit from out of home advertising in the same way. Regardless of a marketers' budget, our platform creates a new environment where affordable and valuable advertising is accessible to all and can be placed anywhere on the network at any time.

Advertisers on Bidooh can buy space in 10 second placements. There is no minimum order - theoretically, an ad budget could be for as little as one single 10 second display. Such an approach opens up the opportunity for even the smallest budgets to trial and experience outdoor advertising.

Simplifying outdoor advertising

Google and Facebook's success is partly due to their ability to simplify the whole process of placing advertisements.

In the same way, we have created a logical, wizard-based process to easily guide advertisers in creating and launching an advert. Our programmatic stages help them choose a location, set a budget, go live and pay for their advert.

This intuitive user-experience means that the Bidooh publishing platform is truly self-service and allows anyone, regardless of experience, to advertise from anywhere.

It's all online

Many existing screens deployed by network owners still use USB sticks and PC's locally to power their advertising displays. Owners spend valuable and costly time driving to each location to update their adverts.

Bidooh's AdPaaS (Advertising Platform as a Service) Platform enables these existing networks to harness this new way to rapidly publish their latest adverts from anywhere, using our platform. This removes both the traditional inefficiencies and also the cost of the distribution and management of the advertisers' creative. Combined, these savings drive down the cost of advertising.

Solving ad delivery reporting

Bidooh solves advert delivery reporting by time-stamping and writing each display instance of an advert to the blockchain. Viewer impression data is similarly written to the blockchain to ensure that there is always 100% auditable accuracy. Advertisers can rest assured that their advert has been delivered as requested, seen by the right people and at the right time.

This auditable transparency is a crucial component to the success of the platform and its integrity. Open third-party access and auditing on the blockchain allows advertisers to independently verify that their budgets have been spent correctly.

Government-led and independent investigations have been undertaken into the current state of the Outdoor advertising market. These investigations have resulted in several reports recommending changes to the current market, how rebates are used by the media agencies and the need for further

investigations into outdoor contracts.

<https://www.campaignlive.co.uk/article/rebates-distort-outdoor-market-says-of/1052952>

<https://www.wired-gov.net/wg/wg-news-nsf/0/62DDB19AFFD615E18025782C00434ECD?OpenDocument>

<https://www.gov.uk/cma-cases/street-furniture-outdoor-advertising-contracts-between-media-owners-and-local-authorities>

Bidooh's approach to using Token transparency greatly helps to address many of the key issues and points laid out by these researches.

Real-time, real audience data

The digital camera capabilities and programmatic AI of each Bidooh display means we can identify how many people saw which advert using facial analysis and facial recognition. Such a level of data allows marketers to make the right decisions on how and where their adverts are placed for maximum impact, effectiveness and for the best conversions.

Real-time audience data and demographics allows marketers to spend their budgets wisely and ensure that their campaign performance is being continually optimized.

It should also be noted that whilst we register many demographic factors on our system, any information analysed is either automatically made anonymous or deleted to avoid future misuse or inadvertent loss.

Ready to compete with online advertising

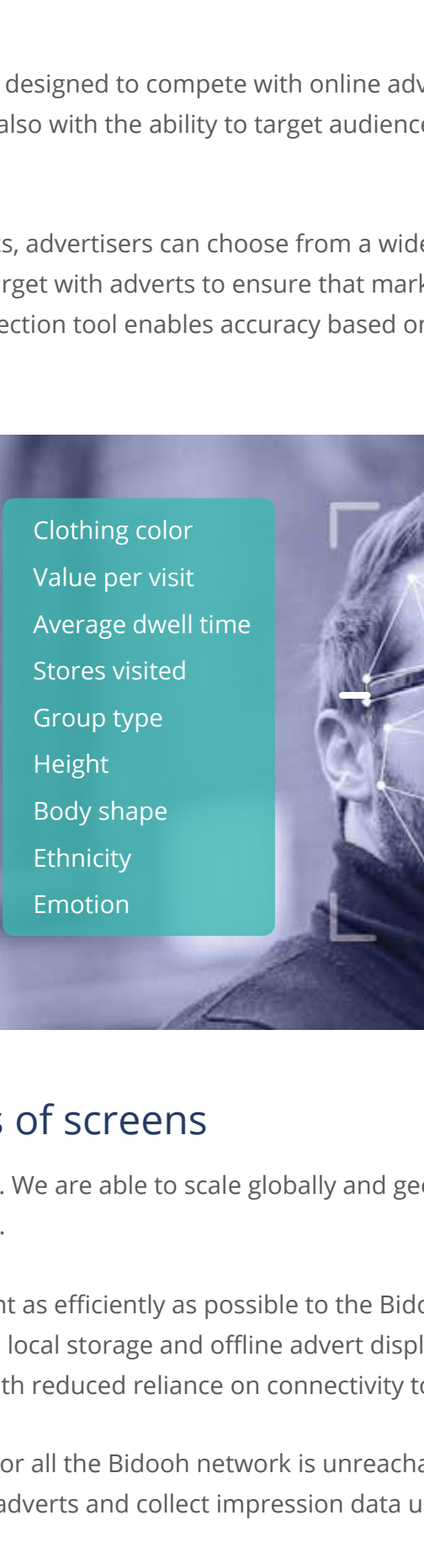
Current global digital advertising spend is \$269.85bn⁹ USD. One of the drivers for the online ad spend was primarily around the simplicity of advertising online through platforms like Google Adwords and Facebook ads. This growth was further driven by the accountability of online advertising which enabled marketers to determine the CPA (cost per acquisition) which allowed them to allocate more funds. New challenges for online advertising are being seen in the growing problem contributed by bots and ad-stacking. On top of this, ad-blocker usage surged 30%¹⁰ in 2016 to 615 million devices¹⁰.

By emulating the simplicity of online advertising for the digital out-of-home space we are making outdoor advertising a viable alternative. In addition, with our advanced audience analytics we are ensuring accountability and guaranteed viewership.

Demographics

The Bidooh AdPaaS Platform is designed to compete with online advertising not only in its low-cost impression based delivery but also with the ability to target audiences dynamically and change creative adverts on-the-fly.

Because we track demographics, advertisers can choose from a wide range of factors, such as what age and gender they want to target with adverts to ensure that marketing reaches the right audience. The targeting and audience selection tool enables accuracy based on other appearances and attributes, these are:



Age
Gender
Beard/moustache
Sunglasses/glasses
Number of visits
Visit duration
Brand recognition
Colors
Hair color

Clothing color
Value per visit
Average dwell time
Stores visited
Group type
Height
Body shape
Ethnicity
Emotion



Scalable to millions of screens

Bidooh has been built for scale. We are able to scale globally and geographically close to screen networks as demand increases.

The platform will deliver content as efficiently as possible to the Bidooh display boxes including the ability to pull store locally. With local storage and offline advert display capabilities, we ensure minimal stress on the global network with reduced reliance on connectivity to the advertising display.

In the unlikely event that parts or all the Bidooh network is unreachable, each Bidooh box will continue to play locally stored adverts and collect impression data until connectivity is regained.

Display and impression based pricing

Bidooh offers very flexible billing options. Each advertising placement remains 10 seconds in length regardless of which option is chosen by the advertiser. This allows for various types of networks to join the global platform, applying their preferred billing option.

Depending on the network type and footfall, different billing methods are deployed:

1. **Impression Based Billing** - charges the advertiser only if there is a person standing in front of the screen. (For example, at a Fuel/Gas Station the screens are set to only bill when there is someone at the screen.)
2. **Display Based Billing** - charges advertisers based on the number of times their advert has been displayed. (For example, in high footfall locations ads are billed by the number of times displayed.)

Fixed vs biddable space

Many locations can experience extremely high demand but only during certain times of the year. To enable a fairer price structure for the screen network owner and easier entry points for advertisers, locations can be enabled to offer fixed price or biddable price advertising space or a hybrid arrangement of both.

Fixed space is digital screen space that can be booked in advance to ensure the 100% guaranteed delivery of a campaign at the specified times and days. Biddable space on screens can be reserved for last-minute auction-style buying of space in real-time.

Budget based delivery

Budget based delivery is our primary route for delivering advertising.

The advertising client selects a daily budget for their campaign. This daily budget is ongoing until cancelled by the advertiser. This type of ad delivery ensures the advertisers message is consistently being exposed to their target audience. This approach also increases the lifetime value of the client and delivers consistent revenues to the platform and network owners. Predictable revenue allows the entire network to become more efficient and deliver better value for advertisers.

Re-marketing delivery, sequential delivery of ads

The more times a person sees an advert, the more likely they are to remember and respond to the message. Known as re-marketing, this activity is a highly common practise online. Re-marketing is scheduled to be added to Bidooh's digital screens, so that advertisers can control the amount of exposure to a single creative by viewer.

Sequential delivery allows story-telling or delivering a string of related messages after each has been seen. This approach is growing in popularity and can reduce the ad spend whilst increasing the exposure to unique viewers to maximize advertiser budgets.

Billboard ROI

Calculating the return on investment (ROI) for advertising spend is currently one of the most difficult things in the billboard industry. Bidooh solves this problem in a couple of ways:

A headless unit - (a Bidooh unit without a screen) to be placed inside a retail store to identify the number of people who saw their adverts, walked into the store and then walked to the check out.

Software - Retailers who wish to integrate our Software Development Kit (SDK) into their app or consumers who use our app will give additional information on ROI which will allow us to check their basket size to determine the value of the shopper. The screen itself in many cases will be touch enabled which will also allow us to calculate the engagement levels by advert and location.

MARKET

Target markets

Our initial target clients are new businesses that have difficulty accessing traditional outdoor advertising, online advertisers, and existing outdoor advertisers including media agencies. All our advertisers would be self-service and have access to the platform directly.

Bidooh target markets



Small Business



Online Advertisers



Existing OOH Advertisers



Media Agencies

Market size

The global billboard (OOH) market is currently at around \$34.8bn per annum⁴. This excludes the potential to acquire additional online ad spend to the billboard network.

Digital out-of-home advertising (DOOH) is growing at a phenomenal rate. The global billboard (OOH) market is currently worth around \$34.8bn per annum⁴ and is predicted to grow to \$45.46bn by 2021¹⁴. For the sector, this demonstrates an unprecedented annual growth rate - significantly higher than the 4% for traditional media. This excludes the potential to acquire additional online ad spend to the billboard network.

Awards

Bidooh has won numerous awards³ for its technology, the most notable one being the Pitch at the Palace³ organized by HRH Prince Andrew and attended by Her Majesty the Queen at St James's Palace in London.

Pitch@Palace



Winners of Pitch@Palace attended by Her Majesty the Queen of England

Bidooh was voted the number 1 innovation by the audience of 400 strong leaders in business for its ground-breaking work in technology.

The Bidooh founders, Abdul Alim and Shaz Mughal were invited to the Royal Family residence at Windsor Castle at a private gathering of leaders where Prince Andrew addressed the room with “this is what the audience voted for last night, this is the future of advertising”.

Trial

Our successful trial is currently running on 16 screens across 4 different locations in the UK. The service allows anyone to sign-up, create or upload an advert, choose a screen, set a budget and go live within minutes. To date, the trial has seen over 500 advertisers sign-up and use the platform.

UK trial sites are located in Manchester Deansgate, Oldham, Rochdale and Nottingham.

Investments

The business has received investment led by Michael Edelson, who for the last 35 years has been on the board of Manchester United Football Club, and who has been instrumental in floating many companies¹¹ including Asos.com, Host Europe and Knutsford Plc.

Other investors include Paul Althasen who is on the board of Euronet Worldwide Inc. to which he sold his business E-pay.

Apadmi Ventures is also an investor which is part of Apadmi Ltd, one of the leading software development companies in Europe that has developed apps for X-Factor, BBC iPlayer Radio, Argos, The Guardian, Jaguar Land Rover and the NHS. Most recently, Apadmi have won the Large Digital Agency of the Year 2018 award¹⁵.

PARTNERS

Partners are a key component to our growth strategy. We will extend the reach of our screen real estate by providing an easy to join and beneficial to use advertising network that is truly global. We are actively engaged with partners on a global basis, and have agreements and discussions ongoing.

At this time, Bidooh's current partner landscape is growing quickly, with 5 global territories already under contract and a significant number undergoing preliminary discussions. The contracted territories are:

Country	Czech Republic	Bosnia	Croatia	Slovakia	South Korea	USA	Romania	UK
Initial Qty	100	50	50	50	50	50	50	16
Target Qty	1000	400	300	300	20000	4000	1000	2000
Status	Active	Active	Signed	Signed	Signed	Signed	Signed	Active
Timeframe	Active	Active	Q3 2018	Q3 2018	Q4 2018	Q4 2018	Q4 2018	Active

Bidooh partners as of September 2018

Our objective is to install a minimum of 2,000 screens directly into the UK. To date we have formalized license agreements with partners covering Czech Republic, Bosnia, Poland and Slovakia, Romania, South Korea and the USA.

Our Business and Site Acquisition Team are currently in discussions with many other partners around the world to extend our global reach. Due to the nature of the businesses viable product and initial partner base, we expect all discussions to move forward quickly and come to fruition.

Bidooh is forecasting to have 8 partners by the end May 2019 covering 14 territories globally. These are:

Bidooh Media (Bosnia, Croatia, Czech Republic, Slovenia), Romania, Midlands Digital, Zoon Media, Korea, California (and Bangladesh), South Africa and Dubai.

By May 2020 we forecast another 4 partners rolling out 1 per quarter going up to 20 territories globally. Each screen should generate upwards of £1k per month and revenues have been forecast on this basis.

GLOBAL GROWTH STRATEGY

Growth Summary

We have a clear strategy for sales driven by our vision to revolutionise and democratise the DOOH market. The Go-To-Marketing strategy is segmented by line of business - by direct and indirect channels; Advertisers, Agencies, Venue Landlords/Managers, Partners currently with digital assets, and finally International Partners for licence agreements. We have an implementation plan with metrics assigned for measurement of success. Our marketing plan aligns with our vision for growth to each line of business and is continuously reviewed and evolving.

Bidooh's strategy accounts for and enables partners to operate their business model in several ways; either using a fixed price per advert; adopting the more progressive bid model similar to Google Adwords or a combination of both based on availability and utilisation throughout the day/month/year.

Growth Challenges

The success of the Bidooh network relies on the growth of the advertiser base as well as the screen network simultaneously. We have assembled dedicated teams for each area who will be focused on following our strategy for growth to enable us to continue to add value to our network. These teams will grow incrementally as we expand into further territories.

The screen network growth initiative has involved a two-pronged approach. Firstly we acquired our own network to ensure that we understand all the pains of scaling and managing a network on behalf of our clients. Secondly, to scale globally with our partner program we have undertaken a fixed number of early adopter programs and progressed onto our global partner program. This now enables new or existing networks to join the Bidooh platform experiencing a more streamlined delivery of advertising, as well as access to a larger and ever growing pool of advertisers. Our sales team will link with our on-boarding team which will in turn push on-boarded clients to our retentions team, ensuring an ongoing customer service experience in order to reduce cancellations and increase ad spend.

ADVERTISER GROWTH STRATEGY

Advertisers are the lifeblood of our business and our plan is to drive advertiser acquisition through a series of market approaches. This will allow us to measure their success and continually optimize our Cost Per Acquisition (CPA) and increase our Return On Investment (ROI) per advertiser. Advertisers will be targeted to join the platform in the various ways described below.

On-boarding & retentions

Regardless of which marketing activity obtained an advertiser, they will all go through an on-boarding process to ensure the maximum conversion into a paying advertiser.

The advertisers will be directed to strategically crafted landing pages designed for the keywords and localization of the campaign. The landing pages will capture initial contact information and send the user to the portal and their on-boarding journey and drop-out rates monitored across the various stages. The on-boarding team will contact the potential advertisers to assist them through the process and minimize any drop-outs from the platform. Once on-boarding is completed, advertisers will then be automatically incentivized to promote the platform to their contacts. The retentions team will continually monitor ad-spend, paused ads and cancellations to ensure we are delivering an excellent experience and the highest levels of customer care to our clients.

Online advertising is our primary method of attracting new advertisers. We will be actively working on our Search Engine Optimization (SEO) and Social Media Optimization (SMO) to enable us to attract as many advertisers organically. We will also be creating Search Engine Marketing (SEM) campaigns targeting potential advertisers via Pay Per Click (PPC), Display and Video marketing. During these marketing activities, we plan to continually engage in A/B split testing and Conversion Rate Optimization (CRO) to ensure that our incoming traffic and advertising expenditure is always working at its optimum. This will ensure that internal advertising costs are minimized as much as possible. Referral marketing opportunities will further incentivize bloggers and influencers to write about the Bidooh opportunity and platform.

Direct telesales

Telephone sales teams will be assembled to contact local advertisers who will then pass them over to the on-boarding staff to walk through the platform. All telesales staff will have experience in advertiser acquisitions. They will also understand SaaS (Software as a Service) and Sales. The team will primarily be focused on the UK market before branching out globally.

Field sales

Field sales teams will visit larger advertisers in person to better explain the proposition and help them get started. Once they have created their first adverts they will be passed to the on-boarding team to maximize their adverts across the network.

Media agencies

We anticipate more than 50% of our ad-spend coming from agencies who handle large client accounts. We will engage agencies using launch events, educational seminars and free budget to start using the platform. The media agency team implement campaigns using sales letters, cold calling and follow-up email sequences with invitations to each event to demonstrate the value of using the Bidooh platform for their clients. Media agencies and large advertisers will have dedicated account managers to assist with creating campaigns across the network.

SCREEN NETWORK GROWTH STRATEGY

Own network

Our primary move to grow the Bidooh screen network is to purchase and deploy our own screens in shopping malls and other high footfall locations. With an already established UK trial base of shopping malls, cinemas, office buildings and forecourts, we plan to write, email, call and visit 500+ further shopping malls in the UK as a starting point. Starting with the smaller malls first, we will quickly prove the technology and position ourselves as an attractive proposition to the larger malls run by the mall management companies.

Partner operators – existing screen networks

As well as installing screens in malls and other large centres, we plan to partner with companies who have existing relationships with shopping malls and other high footfall locations. Using a combination of new screens and set-top units, these partner operators will enable us to roll-out our technology quicker to make the new advertising transition more efficient.

Token-holders network

Token-holders will be given the opportunity to buy screens and start their own digital screen advertising network. Token-holders will be able to place screens in venues small or large, from gyms, foyers, waiting rooms and various venues to start potentially earning revenue from advertisers using their screens on the Bidooh network. Token-holders will be able to accept both tokens or fiat in return for advertising space.

Channel partners - solutions and hardware suppliers

Companies that perform screen and technology installations will be another avenue for us to carry out new installations. Channel Partners will be trained to deploy our technology for clients who are looking for an online and global proposition for managing their advertising. Bidooh will be a compelling choice for channel partners who select advertising technology for their clients as they see fit.

Country-level partners

For faster global scale, we will look at selecting country-level partners who will drive the growth of Bidooh in their countries. Companies who have already established customer bases with our platform will be invited to become target partners. One example has already been brought on-board to deploy screens in the Czech Republic having signed agreements to deploy 2,000 screens across the country. These types of partnerships will be key to the speed of our global growth strategy.

Screen manufacturers

Commercial digital screens come with pre-installed software to help with commercial installations. We plan to be an option within these 'system on chip' platforms. This would allow purchasers of Samsung, LG and other manufacturer screens to have access to our software immediately without needing to download or plug in a box separately. This would also enable us to become a potentially default option for anyone buying new screens for the purposes of advertising.

Screen casing manufacturers

Companies that build bespoke standing totems for shopping malls and other venues carry an additional cost overhead for the hardware required to run the software. Bidooh can partner with these companies to either supply compatible hardware or pay them for each activated totem on our network. This would give new entrants to the screen advertising market visibility of Bidooh before any other screen software. This would allow us to quickly become a viable alternative when it comes to a turn-key advertising platform.

Bidooh box & software download

To help existing screen owners utilize their screen investments to the full, the Bidooh box will be used to connect them to the network without the need to replace their existing screen hardware. By allowing a software download, hardware owners can install, configure and join the Bidooh network with no upfront costs. This approach will open the way for many established networks to join risk-free. All new screen owners will be vetted and all screen locations will be publicly accessible. We propose periodic physical checks across our own and partner networks to ensure that the quality of all screens are to acceptable standards.

Growth by acquisition

We propose to consider through acquisition smaller screen operators that are not using the Bidooh platform but may be commercially suitable to do so. Such target acquisitions would have existing contracts within high-footfall areas that we can immediately monetize with our platform. Any acquisitions would be made with a view to assist in the growth of our own partner networks and potentially distribute the newly acquired companies' screen assets to help our partners expand within their territories or target markets. The assets will either be sold with our network or leased for increased ad revenues. Growth by acquisition will allow Bidooh to pool resources and deliver better value advertising to its clients.

Demand Side Platform (DSP) Integration

To allow for programmatic buying of our ad inventory we plan to integrate demand side platforms which serve advertising directly to the screens based on our available demographics. The DSP's we intend to integrate with include Rubicon Project, Platform 161, Splicky and OutMoove for programmatic buying.

TOKEN ECONOMICS

Blockchain use case & token use

A major challenge for current out-of-home advertising is that it is based on an element of trust. How do advertisers know their advert has been displayed in the times and frequencies for which they have paid, or against the right targets? Most of the industry is still based on decades-old play-out reports and excel spreadsheet reporting. It is time to bring the billboard advertising industry truly into the digital age, and onto an open and transparent digital ledger.

“ Welcome to the Bidooh (DOOH) token ”

The Bidooh token represents a single 10 second advertising space on a digital advertising screen. To create transparency the platform records all displays and views on the blockchain to allow for independent auditing.



The Bidooh platform is designed for global scale. New and existing screen owners can join the network to create the world's first truly global network without borders. Advertisers can then place adverts on any screen in any country at any time.

The DOOH token will allow advertisers, media agencies and network owners to buy space on the Bidooh platform in real-time without the need for fiat payments.

The DOOH token uses will be:

1. **Access:** Buy advertising space in real-time
2. **Reward:** Get rewarded with tokens for vetting the quality of the adverts
3. **Engagement:** Tokens for seeing adverts and engaging with adverts (app users)
4. **Spend:** To spend tokens at selected retailers
5. **Earn:** Freelancers earn tokens for graphics/copy-writing/translation work

Token Sale Summary

Our token economics have been calculated to ensure that our advertising platform can run efficiently and allow token holders to genuinely benefit from holding their tokens. The platform currently charges a minimum of 1p (1.4 cents)* to place a single 10-second advert on a single Bidooh screen. This equates to \$14 for 1,000 adverts or \$28 for 2,000 adverts. Each token buys one advert instance on a Bidooh screen and at the ICO price the cost of the tokens will be \$1 USD for 2,000 tokens. It will therefore be 28 times cheaper to buy advertising using tokens when the platform accepts it.

AVAILABLE TOKENS

126 000 000 000

TOKEN NAME	UNIT PRICE	MINIMUM PURCHASE
DOOH	1 = \$0.0005	\$100 USD
SOFT CAP		HARD CAP
\$5 000 000		\$25 000 000

Payment Methods: Ethereum, Bitcoin, Litecoin, Bitcoin Cash, Stellar Lumens.

*Conversion rates will apply in USD on the date of transfer using cryptocompare.com or xe.com.

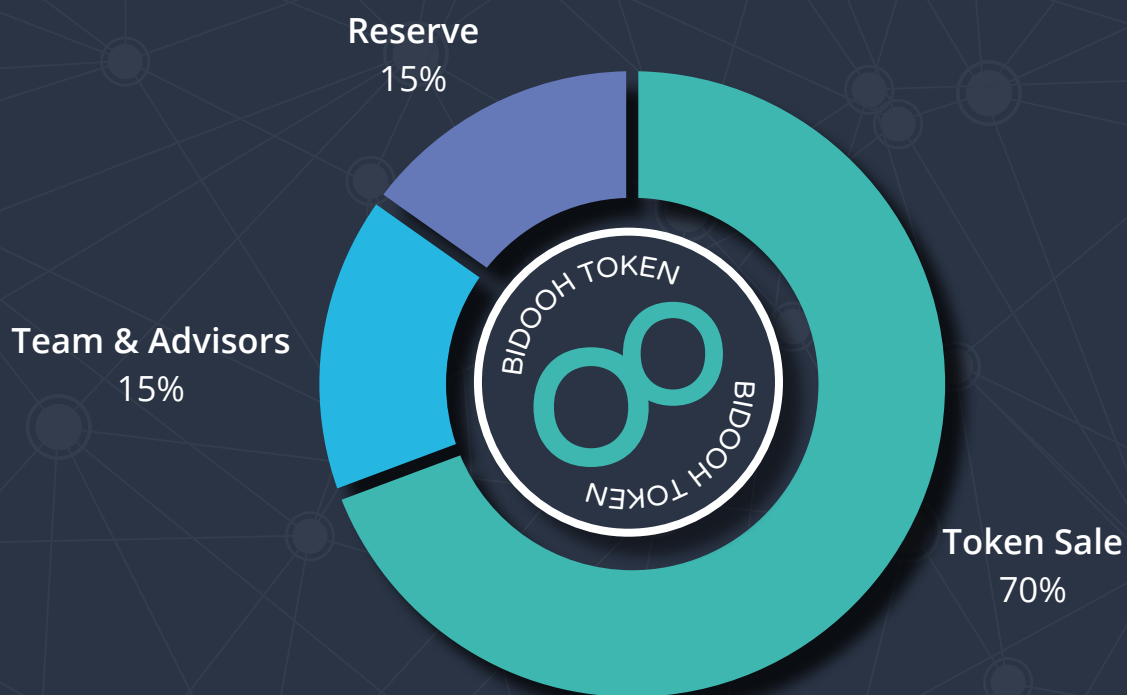
Unsold tokens

All Bidooh Tokens (DOOH) that are not fully distributed during the entire token sale will be reallocated into the Reserve pool. This will continue to bring value to the ecosystem by allocating those tokens through partnerships.

Token split and allocation

Bidooh has allocated 70% of the tokens for the token sale. 15% of the tokens are being held in reserve to be used for bounty programs, air-drops, partnerships and other promotional activities. The remaining 15% will be allocated to Bidooh's team and advisors.

Token distribution

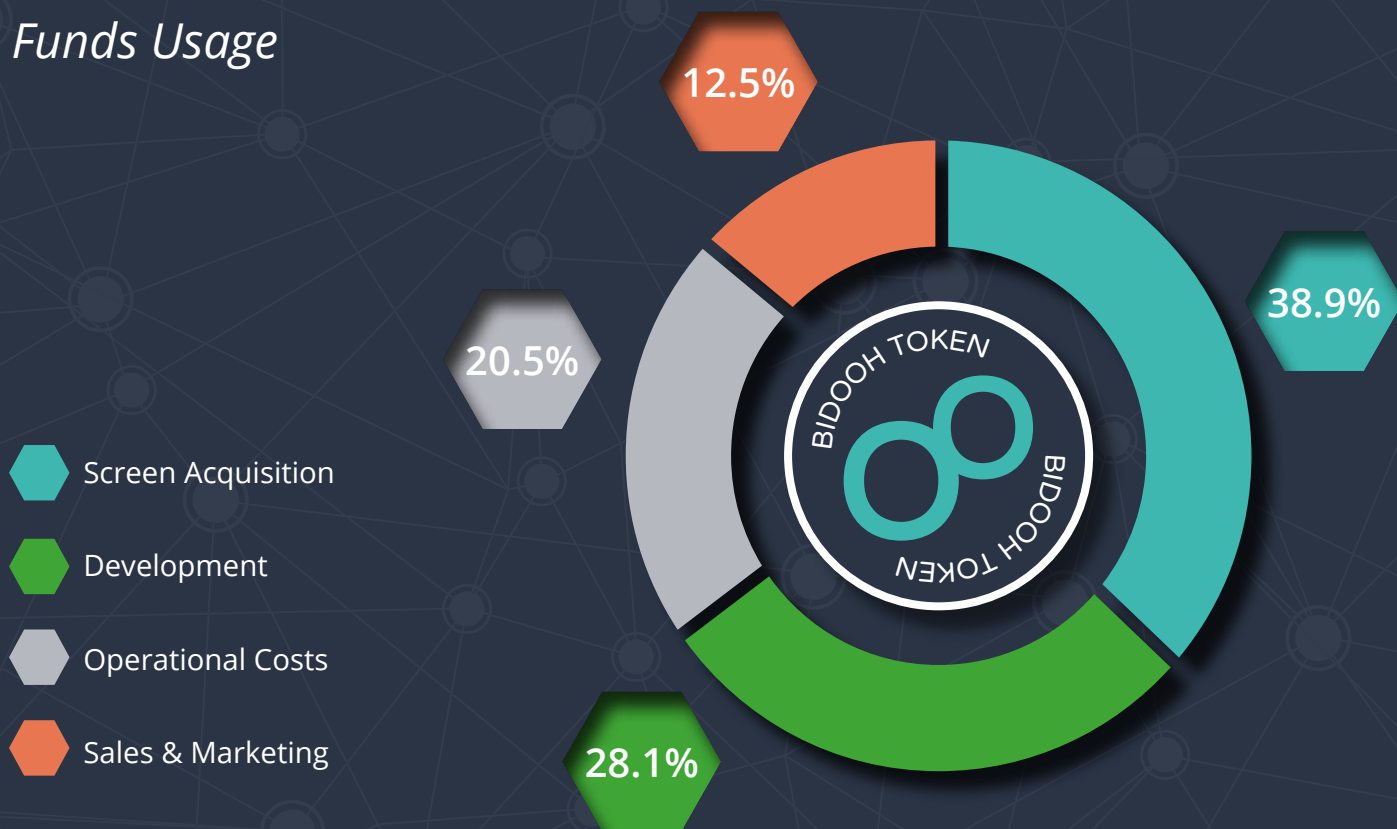


Funding allocation

The funds are being used to complete the build of the Ethereum based blockchain smart contract, build and install at least 5,000 digital advertising screens, and sales and operational costs. The chart below shows the breakdown.

Screen Acquisition is almost 40% of the costs, and this assumes purchasing 5,000 screen units and installing into multiple locations.

Funds Usage



All costs are estimated and are subject to change without notice.

Token benefits

Provided by Bidooh	Benefits to the Advertiser
Transparent reporting of display and impression data	Knows exactly what has been displayed, when, and where
Bringing trust into the industry	Faith that they can advertise and check that it was shown
Impression data and display data reporting	Can verify the data matches what they were expecting

Each time the advert associated with a transaction has an actionable event, such as being successfully scheduled, triggered for display, displayed and viewed by a person(s), the relevant data points and metrics are stored against the transaction and stored on the blockchain.

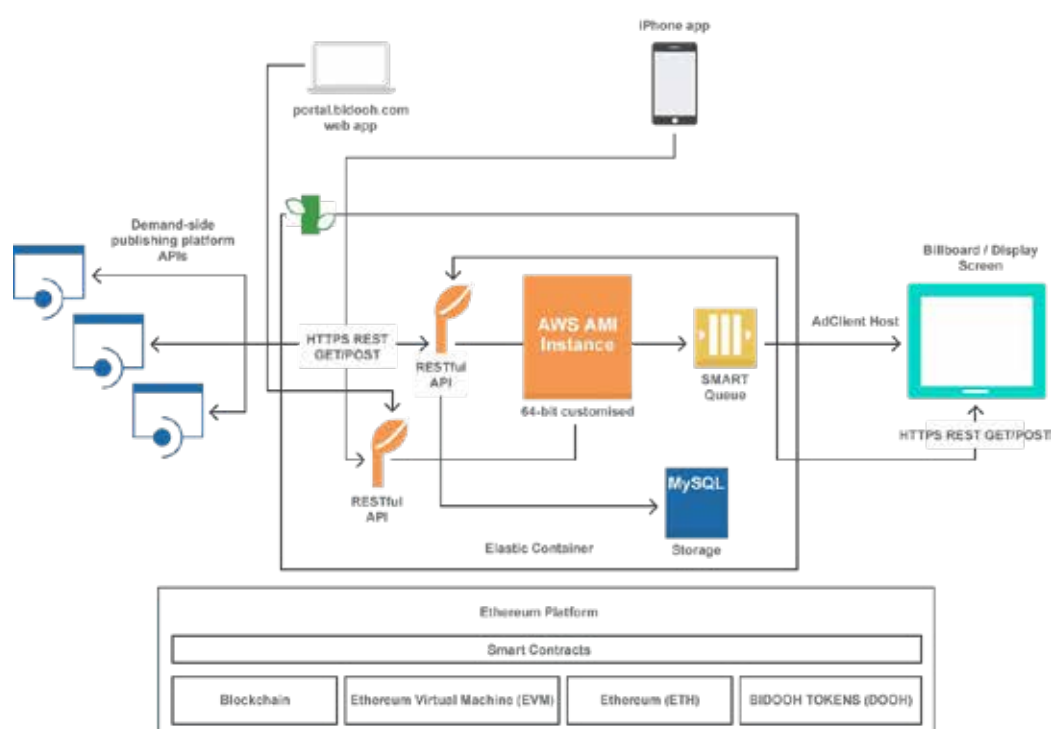
DOOH token value

The Bidooh token (DOOH) will be based on the Ethereum blockchain. Each DOOH token represents a 10 second ad space on the Bidooh platform. Advertisers can pay with a DOOH token to purchase a 10 second time slot for their advert when publishing their advert on any given location chosen. Bidooh tokens can also be used for up to a 50% discount for advertising spend on allocated screen space.

Once the advertiser has submitted their advert and spent the token, the transaction along with data points around the advert campaign and the adverts' chosen location(s) are stored on the Ethereum blockchain. Each time the advert associated with the transaction has an actionable event such as being successfully scheduled, triggered for display, displayed and viewed by a person(s), the relevant data points and metrics are stored against the transaction and stored on the blockchain.

The DOOH token itself will be created as ERC20 tokens. The ERC20 standard has been chosen since the standard itself has been formalized by the Ethereum team and is listed on Ethereum Github page.

The ERC20 standard was created to enable interoperability across decentralized applications, exchanges and interfaces. The ERC20 standard establishes a protocol (common set of rules) for tokens issued via Ethereum smart contracts.



Bidooh's smart contracts deployed on the Ethereum blockchain will conform to the ERC20 protocol. Smart contracts are self-executing code blocks which contain data and code functions wholly relevant on Bidooh token transactions occurring in real-time.

The platform itself will be looking to use a faster and cheaper blockchain than the current Ethereum standard. We are currently exploring the capabilities and suitability of using blockchain such as EOS, Stellar, RSK, Cardano, Tezos or competitive technology such as Hashgraph.

TOKEN USAGE

Here are some usage examples on using the DOOH tokens. This enables us to create a complete ecosystem to help tokens flow through the system and bring benefits to all holders and users of it. These methods may change or enhance based on technological breakthroughs or limitations.

Buy digital billboard screen adverts

Each token buys 1 10-second advertising instance. Depending on the screen size and location the ad time could increase or decrease. For example, for smaller fuel station screens the advert may last 15 seconds and on larger outdoor billboards the ad may only be 6 seconds.

Earn tokens seeing ads

Consumers will be able to earn tokens when they see adverts on the digital screens in front of them. All they need to do is download and use the Bidooh Consumer App. This will reward them with tokens as they walk towards digital screens. If they tap the screen to see more about the advert, they will receive more tokens. Some adverts will also offer more tokens than others. Some may also choose to offer other kinds of gifts, prizes or vouchers for engaging with an advert. This will encourage consumers to interact with the adverts that attract them and get rewarded for their attention.

Redeem tokens

The tokens consumers collect from screens will be able to be spent at participating retailers and restaurants for part or full purchases at the discretion of the retailers. The greater the value the retailers offer the more likely token-holders will visit their store to redeem them, ultimately starting a buying relationship. The value to the retailers is that they then use these tokens to purchase more ads and rewards, thus capitalizing on the referrals and community sharing their offers and brand.

Freelancer token community

Many small advertisers will not possess the creativity or time to design their own adverts. To overcome this, we plan to integrate the ability to choose a graphic design freelancer inside the platform to design adverts in return for tokens. Advertisers can use their token balance to pay for design or copy-writing work and token holders will be able to join the freelance community within Bidooh to earn more tokens.

Crowdsourcing administrators

We propose to introduce a controlled trusted crowdsourced community to verify ads. Multiple parties verify ads which would then go live on the network. If a single party within a group 'un-approves' an advert, the advert will go forward to manual review. Each time a community member reviews an advert they will receive tokens for their service. The more accurate the reviewer, the more tasks they will receive and the more tokens they will earn. Trial piloting of this system will be undertaken to ensure that this method is both robust and tested thoroughly prior to going live.

Social media integration

The brand called 'you' is at the centre of any social media users world. We understand the importance of the consumer in our advertising ecosystem and therefore want to allow users the opportunity to push their influencer status. With permission from our app users, advertisers will be able to use their photos and imagery in their adverts. Imagine seeing your favourite photo across large digital screens, maybe a birthday message from your favorite brand, favorite band or even movie star. We want to make you the star of the show. A users' permission is granted from within the Bidooh Consumer App and can likewise be revoked at anytime. Each time as users' photo is used in ads, they earn tokens.

Brand Scan

A consumers' choice of clothing brand, style and color is important to them. The Bidooh platform will integrate with third party computer vision API's which will allow advertisers to instantaneously change their ads based on the brand, style or color of the clothing worn by a passing consumer. If, for example, the consumer is wearing a Nike top, the cameras will recognise that and the advertiser may choose to change their ad to show appreciation to the wearer "thank you for choosing Nike" or it may be a competitor advert who would like to target a particular brand or style. Whatever the

scenario, the platform enables adverts to change in real-time. Every time consumers engage with such ads and allow it to scan their style profile, they will earn tokens. Our most recent tests show a 5 second delay for the processing of image recognition data which means not all screens will be able to utilise this method or targeting. It is anticipated that this speed-to-response will shorten as the platform scales and new advancements and improvements are implemented on more screens. Style profiles may be scanned off social media photos with the consumers' permission and on location using cameras.

App SDK

Retailers thrive on useful data. The more we can supply the better retailers can appeal to their audience. Our SDK will allow retailers to integrate the ability to monitor shopper habits to serve their customers better through hyper-personalized targeting. The SDK can also be used to enhance the shopping experience to allow checkout at screens instead of walking into stores. This allows any retailer to expand their presence and shop window to thousands of screens and engage consumers across the world in a much smarter way. Every time a user is engaged inside any approved third-party apps, the user will earn tokens.

Billboard App Store

A big contributor to the success of the iPhone is the App Store ecosystem. By allowing developers to build magical apps for our digital screens, we believe we'll open up a new world of DOOH possibilities. By harnessing the power of collective creativity, the best innovations will come from our input by our users. We plan to allow developers to let their creativity loose and offer a controlled platform and approval system for publishing apps into our billboard app store. By building a DOOH app ecosystem and allowing apps to tap into the various sensors on Bidooh boards and controlled screens we expect to see digital billboard interactivity taken to a whole new level. Advertisers will then be able to view and select apps to be deployed into screens of their choice to enhance their digital ad campaigns. When a publisher uses an app, the developer is rewarded with tokens for its continued use. This will encourage developers to build highly engaging apps.



PRODUCT

Bidooh Platform

Bidooh's current platform, which is live and in use, is a turnkey advertising management platform which allows you to add screens to your network instantly, giving you full management functionality of screens in all of your locations. Bidooh's smart advertising platform enables advertisers to instantly create, publish and pay for an advert in real-time.

The Bidooh AdPaaS (Advertising Platform as a Service) platform connects Advertising content players fitted with additional hardware (such as cameras, and other sensors) to fetch content from a centralized advertising creative content store and play them on a local screen.

The platform also allows individuals to sign up to the platform, enter an ad creative, choose locations, and pay via a credit card for an advert to be in the network. The platform records display, impressions, cumulative audience impressions for an advert and who has potentially seen the ad creative.

The platform is accessible online through a web portal (live) or via an iPhone app (available Q3 2018).

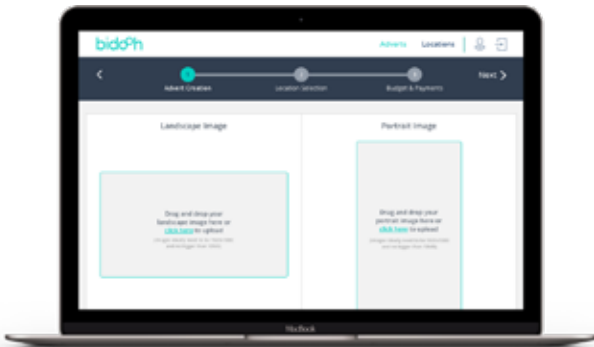
Portal accessible at <https://portal.bidooh.com>

An advertiser can create a template-based advert comprising of just a text advert or a combination of text imagery such as a company logo and main image. Alternately, advertiser is able to upload a ready-to-go advert to the portal. The portal supports both portrait and landscape-based adverts.

Ad Creation



Ad Upload



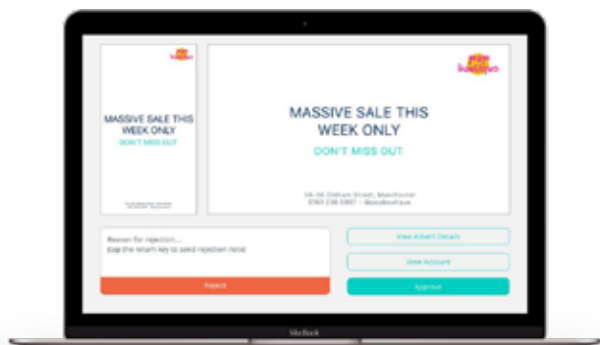
Ad Preview

Once the advert is uploaded and the advertiser is satisfied with their advert, they can choose which location(s) they would like to publish their advert(s) to.

The final step is simply choosing their daily budget, and entering their payment information if it has not been entered already.



Once the advert is submitted, a member of the Bidooh team is alerted via the portal and can approve/reject the advert.



Once approved, the advert is scheduled to go-live onto the Bidooh network of screens within a few minutes.

The advertiser can then immediately review analytics around their adverts such as Impression Details broken down over 24 hours with full historical breakdowns.



Advertisers are able to view balances, invoices, transaction history, and payment details. Bidooh administrators can enable video advert creation for an advertiser along with enabling hyper-targeting of adverts and schedules:

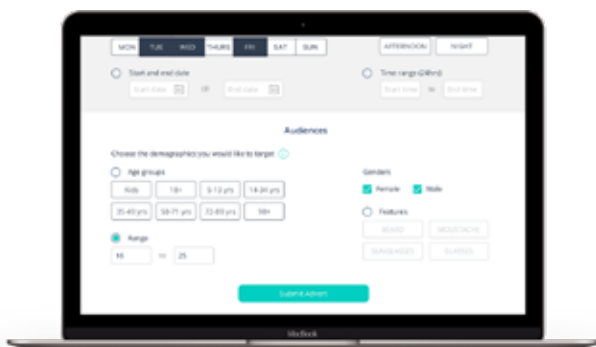


Advertisers are then able to attribute schedules for their adverts based on various options:

- Everyday
- Certain days
- Date and time ranges
- Time of day

Advertisers are also able to attribute targeting profiles for their adverts based on various audience demographics alongside scheduling:

- Age groups
- Gender
- Features {Beard/Moustache/Sunglasses/Glasses}



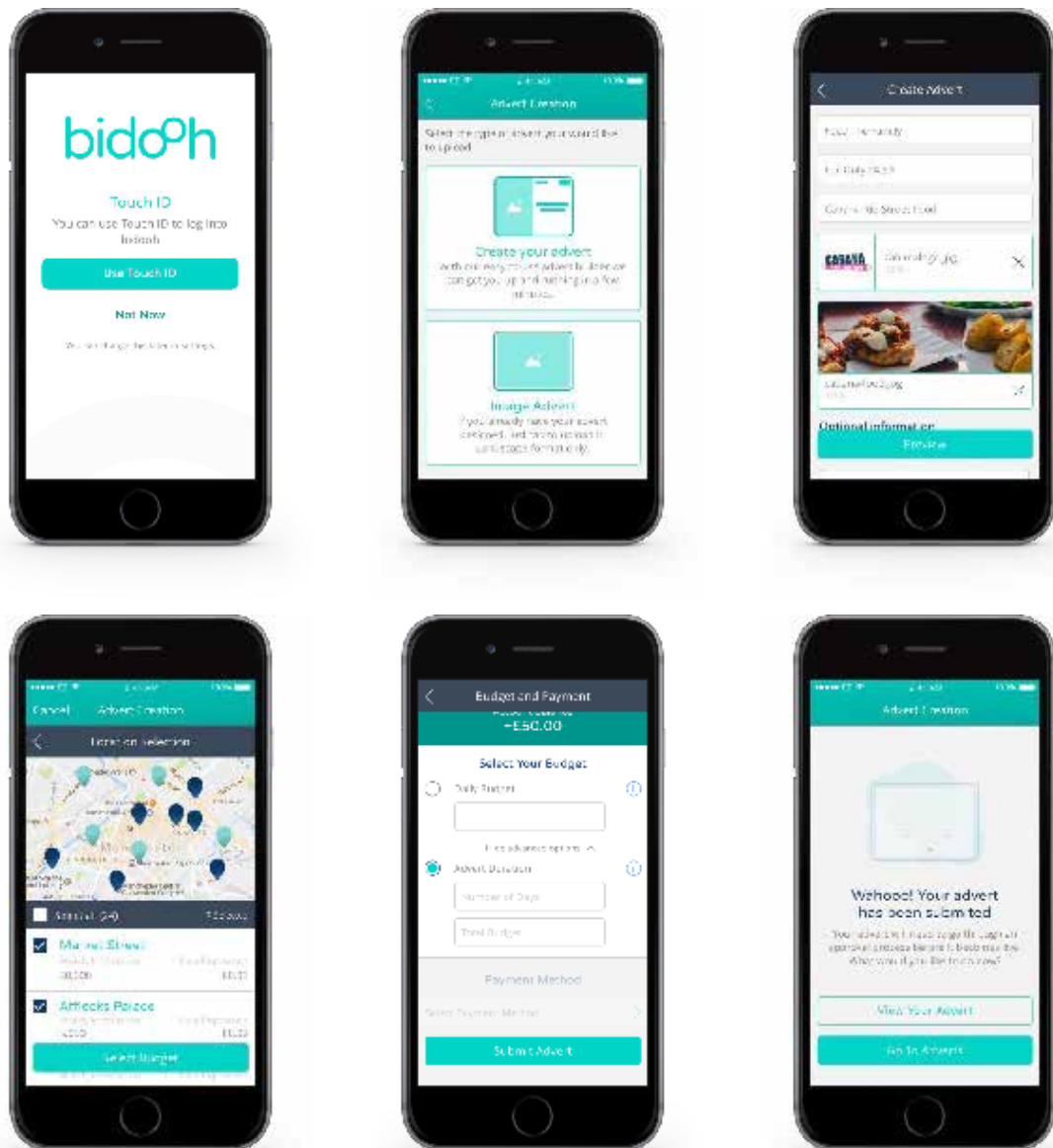
Mobile App

Our iOS app currently being developed with TouchID authentication enabled will allow advertisers to create, publish and pay for an advert in the similar fashion of the online web portal.

The app allows assets to be uploaded from an advertisers phone or third-party cloud storage services such as Dropbox.

Once approved, the advert would be scheduled to go-live onto the Bidooh network of screens within a few minutes.

Ad Preview



From App to Screen in 60s

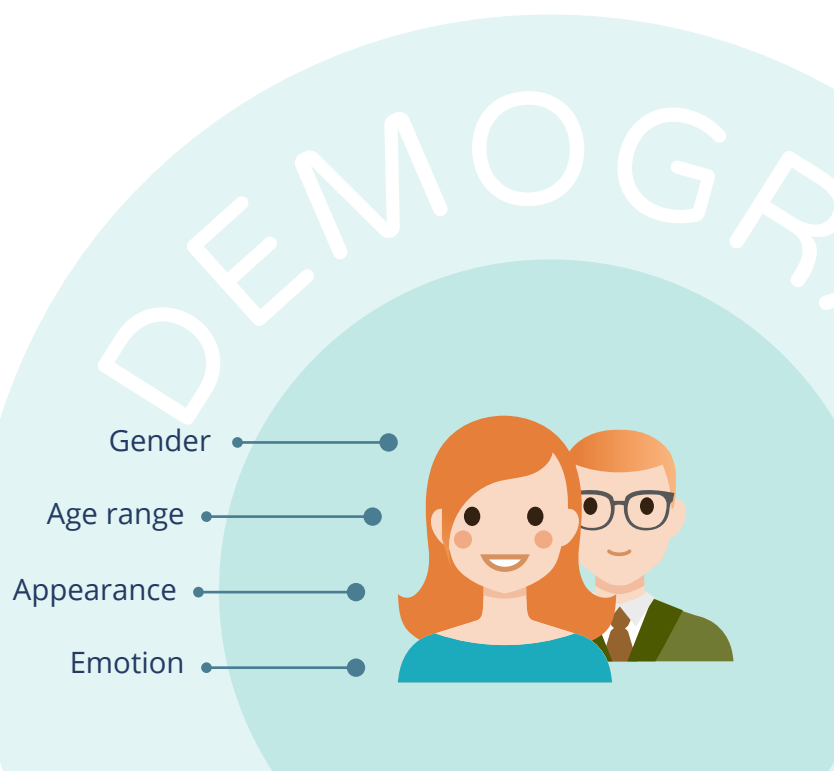


Monitoring platform

Every screen in the Bidooh ecosystem is monitored in real-time, interactive dashboards reveal analysis of the following data points:

Shopping mall managers:

- Footfall detected per screen
- Gender footfall per screen
- Sentiment breakdown per screen
 - Happy
 - Sad
 - Angry



Bidooh support (In addition to shopping mall data):

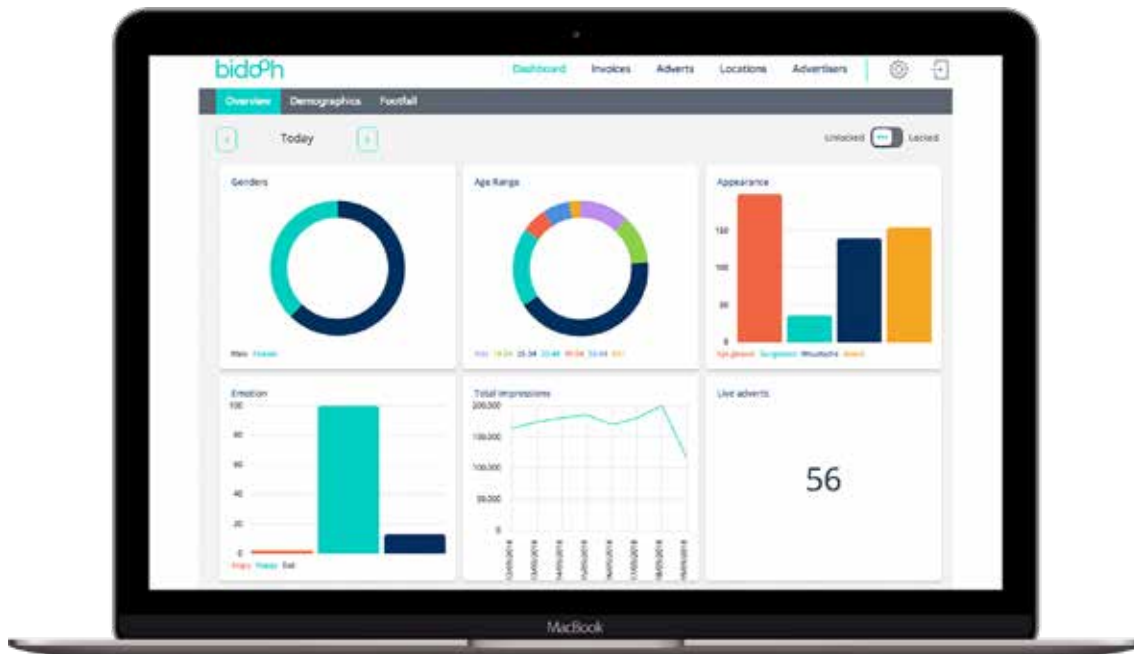
- Live Impression delivery
- Demographics per location
- Revenue per location
- Live adverts per location
- Screen status
 - Connectivity
 - Running processes
 - Alerts
 - Live snapshots of what's being displayed
- Total unique faces per location

Bidooh support and partners (Media owners whom partnered with Bidooh to deliver the full Bidooh platform with their own screens):

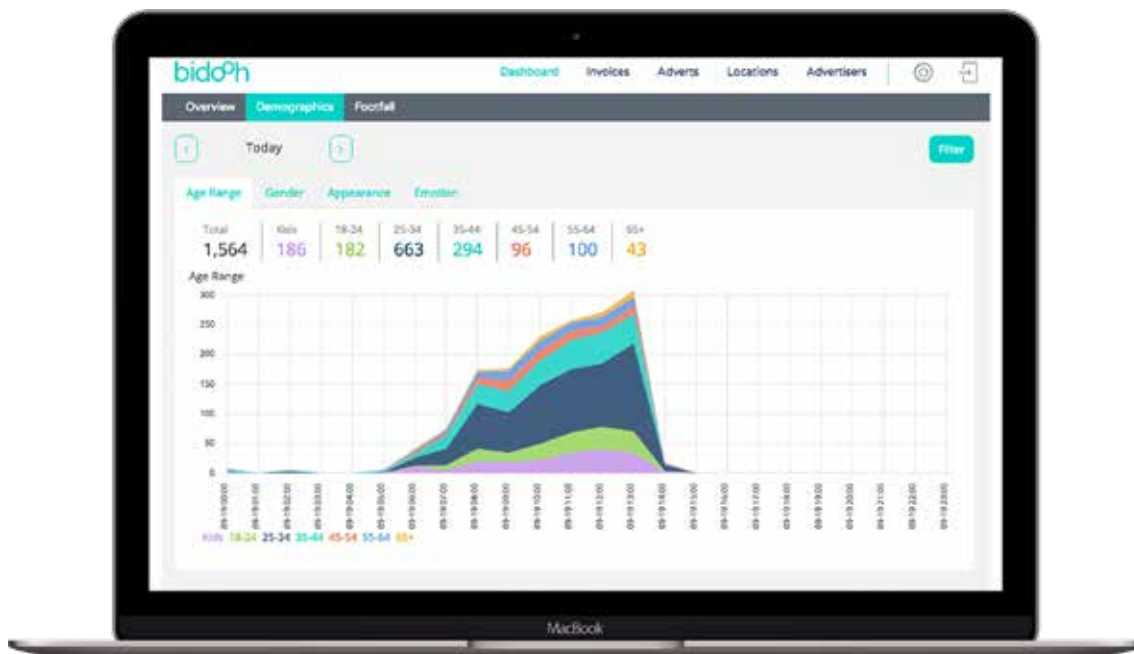
- Revenue per location (Media owner owned)
- Live adverts per location (Media owner owned)
- Demographics per location (Media owner owned)
- Footfall detected per screen
- Gender footfall per screen
- Sentiment breakdown per screen
 - Happy
 - Sad
 - Angry
- Screen utilization %
- Location capacity
- Current budget expenditure per advertiser

The following images are snapshots of the dashboards which give an overview of the above data analysis:

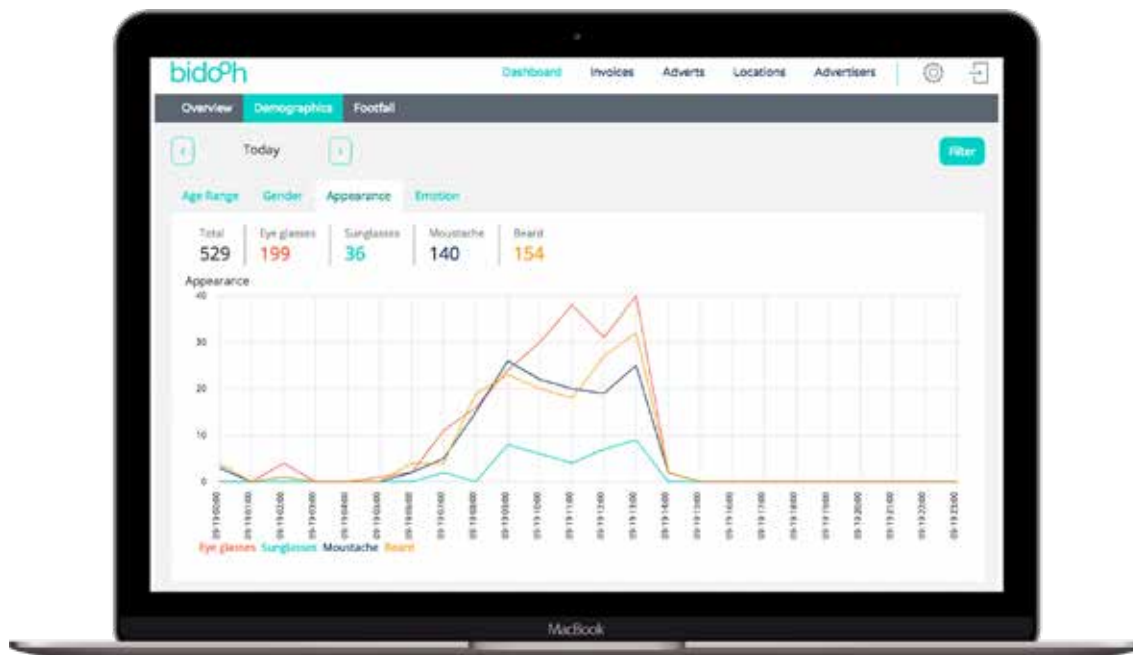
Management Dashboard



Demographics dashboard: Age

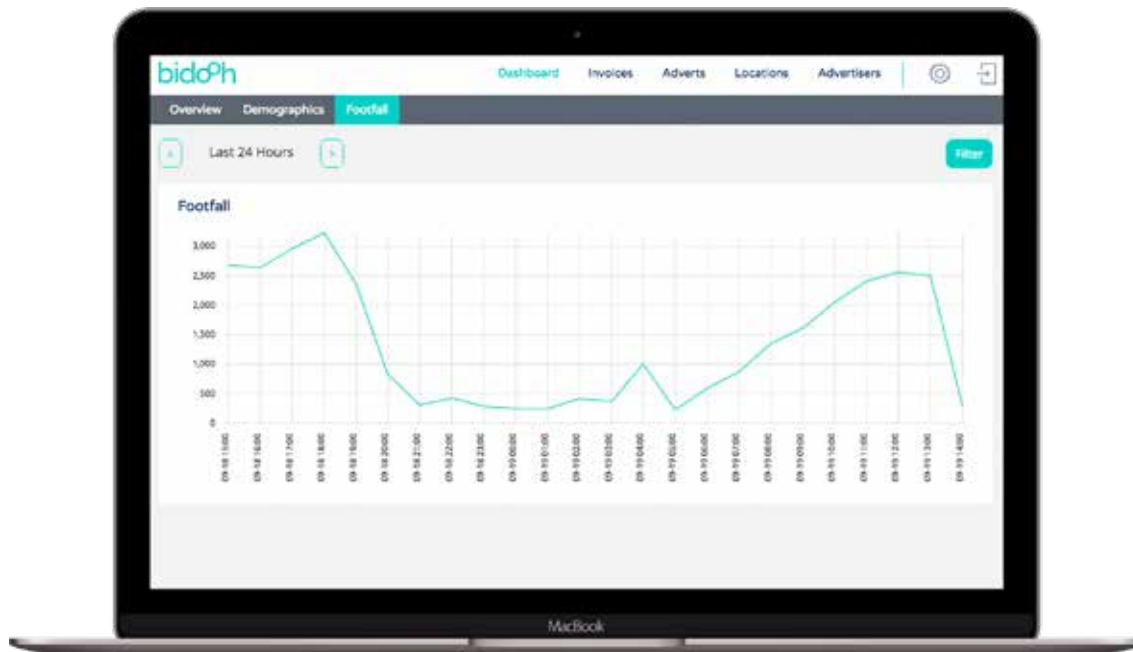


Demographics dashboard: Appearance



You can select any date range to analyse specific demographics such as appearance, age, gender, beard/moustache, emotion, glasses/sunglasses. Future options will include: number of visits, visit duration, brand recognition, colors, hair color.

Footfall dashboard



You can track and report on footfall based upon the number of visitors that pass the screens. Bidooh cameras capture footfall impressions up to 7m away from the screen.

Security & user privacy

We follow industry best practices of using at rest encryption, encryption and tokenization for communications with our APIs, and PCI approved partners for payment processing. Our development partner, Apadmi, develops secure applications for a number of financial businesses, and understands how to protect and secure User Information.

Patents pending

Bidooh has successfully applied for two patents which have been submitted in the UK and Worldwide as pending. The following provides details of the patent numbers, filing dates, statuses, brief descriptions and summaries of the patents.

Patent No. 1712309.2

Filing date: 01/08/2017

Status: Pending

Short description: A smart display system comprising an imaging device operable to capture an image, a multi- core image processing unit operable to process the captured image so as to determine features of the image and a display screen operable to display an item of content relevant to the determined features of the image.

Patent No. PCT/GB2017/053292

Filing date: 01/11/2017

Status: Pending

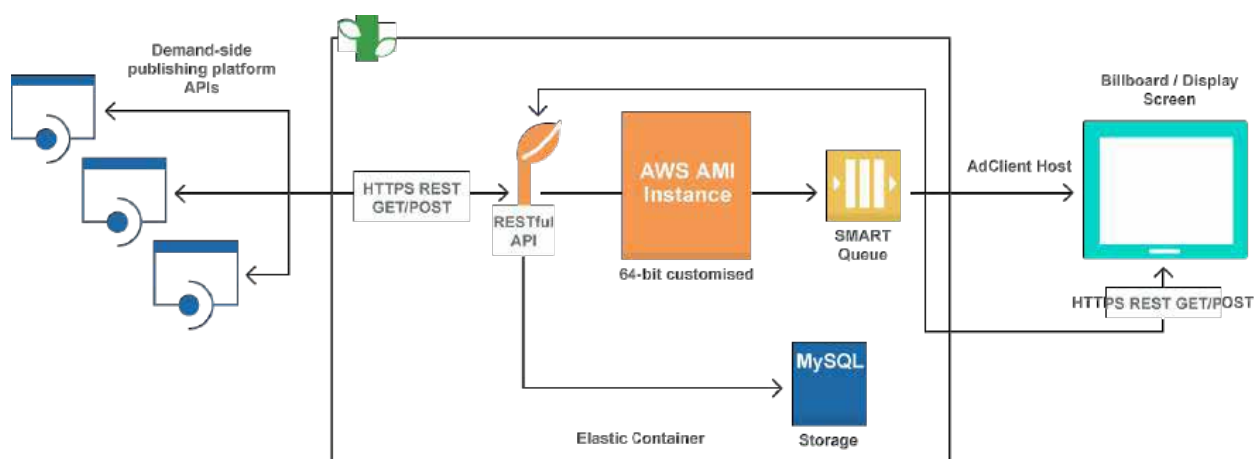
Short description: A smart display system for displaying content related to characteristics of a mobile device (proximity based) The smart display system may comprise a content ranking unit operable to rank the identified items of content in order based on advertising characteristics associated with each item of content.

The advertising characteristics may include one or more of the following: maximum bid per use, maximum budget per day, maximum impressions per person and/or maximum impressions remaining per use per person. The camera and analysis unit allow for adverts to be targeted based on the style of clothing of a user of a mobile device. This increases the chances of the adverts being found to be relevant to the user of the mobile device.

Open API (Application Programming Interface)

Bidooh will enable a fully programmatic open API which allow multiple demand-side advertising publishing platforms to route their advertising campaigns to the Bidooh display ecosystem. Bidooh's intelligent algorithms will accommodate these campaigns into its existing schedules in real-time. The Bidooh portal will automatically auto-populate the 3rd party campaigns into the back-end enabling owners of the publishing platforms to leverage the full capabilities of the Bidooh system including real-time impression data, who has seen their adverts, billing and invoicing.

Open API Architecture Diagram



Technology partnerships

Bidooh enhances its own technological skills base through it's partner Apadmi. With over a decade of software and application development, Apadmi are a strategic resource that enables Bidooh to build, test and deploy new applications, services and updates at speed and at scale.

This flexibility of resource helps Bidooh focus on their key project work whilst ensuring access to the right development expertise and know-how as the work-streams evolve.

ROADMAP

Q1 2018

- Deploy MVP of Bidooh Web Platform v1.0
- Write ERC20 smart contract code
- Audit smart contract code



Q2 2018

- Deploy MVP of Bidooh Web Platform v1.1
- Build network capability for global scalability with languages and currency support
- Video support with 10 second intervals
- Build alpha advertiser Bidooh iOS app v1.0



Q3 2018

- Deploy Bidooh Web Platform v1.2
- Location specific stats, age and gender breakdown
- Screen utilization stats
- Personalized targeting to age & gender
- Deploy ERC20 Smart Contract



Q4 2018

- Deploy Bidooh Web Platform v1.3
- Media Agency support with tiered account
- Advanced ad scheduling for future bookings
- Build beta advertiser Bidooh iOS app v1.1



Q1/Q2 2019

- Deploy Bidooh Web Platform v1.4
- Prototyping blockchain integration – advert impression displays and views stored to the blockchain
- Release Bidooh Web Platform v1.5 Blockchain Enabled version
- Release advertiser Bidooh iOS app v1.2
- Release advertiser Bidooh Android app v1.0
- Release consumer Android and iOS v1.0 apps for earning tokens on the go



Q1/Q2 2020

Vehicle recognition-based targeting for large format outdoor screens



Q3/Q4 2019

- Freelancer community integration
- iOS & Android SDKs for billboard proximity detection to target adverts based on public social media feed posts
- Clothing brand recognition targeting
- Align all app version features
- Live video broadcast
- QR Codes to purchase products at screen

Q3/Q4 2020

Real-time machine-learning based automated bidding, surge pricing, dynamic campaign delivery

THE BIDOOH STORY

Seeing is believing

Bidooh was started by Abdul Alim and Shaz Mughal. The two tech pioneers had gotten together with the aim of brainstorming a world-changing idea. After many hours deliberation, whiteboarding and ultimately no profound ideas, they decided to take a well-earned break, grab something to eat and watch a movie.

The 'aha!' moment came almost accidentally whilst watching the movie 'Minority Report'. The defining scene is where Tom Cruise goes into a well-known store and walking toward a screen, which on recognising him, instantly changes to showcase information to his preferences. That was it! They could see a world where digital billboards could dynamically change their messages or adverts depending on who was nearby. That world was now.



The duo set to work and within 18 months they had built, what they called, the world's smartest digital billboard. The billboard could identify who was walking towards it and was able to use their name and Facebook photo to display a personalized offer and message. They named this first platform OfferMoments. Everyone who saw it in operation, loved it.

As innovations go, the potential was huge. To realise this, they knew they would need outside investment and help. After winning VentureFest Manchester they presented to Angel investor Michael Edelson. Michael saw the business potential and invested in the business and became chairman.



Michael Edelson is a non-executive director of Manchester United F.C.

Michael is an angel investor, venture capitalist and philanthropist who has been instrumental in creating numerous cash shell companies on both AIM and PLUS.

Source: Wikipedia

The press picked up on this new innovation too and it was quickly featured in Retail Week, The Drum and Huffington Post. Not long after, the platform won several awards³ for innovation including Pitch at the Palace³, an event organized by HRH Prince Andrew in London at St James's Palace and attended by Her Majesty The Queen. The founders were invited to Windsor Castle where HRH Prince Andrew announced, "this is what the audience voted for last night, this is the future of advertising".

With Michael's guidance, they assemble a varied team of experts and soon discovered the many challenges that exist within the present billboard market. A \$34.8bn⁴ market that's still booked over the phone, time consuming, resource heavy and cost prohibitive. This needed to be fixed.

Their vision to book and manage digital advertising in as simple a way as ordering an Uber and priced like Google Adwords was well underway. Any size of business, large or small, can now buy advertising on digital screens in real-time.



...and so, in 2017, Bidooh was born.



Watch the Bidooh explainer video:

English | Korean | Japanese Videos:
<http://wke.lt/w/s/bCMOu>

Renamed as Bidooh, it was so-named to be easier to identify as a brand and highlighted the platforms' value to both out-of-home (OOH) advertising and its flexibility to operate as fixed priced service or as a biddable auction (Bid). Bidooh is not only a smarter way to deliver advertising, but a complete turnkey platform that allows advertisers to book space in real-time and can go live on a screen within minutes.

New and existing digital screen owners can join the network to create the world's first truly global platform without borders. Any screen can now become an advertising screen by simply plugging in the little Bidooh Box into the HDMI port. To trial our platform, we installed 10 screens in 4 different locations across the UK. This pilot launch proved the concept, technology and market for the platform.

Simply put, Bidooh's platform allows any advertiser or media agency to create or upload an advert, have it approved, and then go live on a screen in minutes.

A photo of a live screen in Manchester Deansgate which you can book through Bidooh.com



THE JOURNEY SO FAR

Awards

Bidooh has won numerous awards³ for its technology, the most notable one being the Pitch at the Palace³ organized by HRH Prince Andrew and attended by Her Majesty the Queen at St James's Palace in London.

Bidooh was voted the number 1 innovation by the audience of 400 strong leaders in business for its ground-breaking work in technology.

The Bidooh founders, Abdul Alim and Shaz Mughal were invited to the Royal Family residence at Windsor Castle at a private gathering of leaders where Prince Andrew addressed the room with "this is what the audience voted for last night, this is the future of advertising".

Trial

Operating as a minimum viable product (MVP), our successful trial has been running across 16 screens in 6 locations across the UK and allows anyone to sign-up, create or upload an advert, choose a screen, set a budget and go live within minutes. The trial has already seen around 500 advertisers sign-up and use the platform.

Investments

The business has received investment led by Michael Edelson, who for the last 35 years has been on the board of Manchester United Football Club, and who has been instrumental in floating many companies¹¹ including Asos.com, Host Europe and Knutsford Plc.

Other investors include Paul Althasen who is on the board of Euronet Worldwide Inc. to which he sold his business E-pay. Apadmi Ventures is also an investor which is part of Apadmi Ltd, one of the leading software development companies in Europe that developed apps for X-Factor, BBC iPlayer Radio, Argos, The Guardian and NHS.

Our Vision

Our vision for Bidooh has always been to revolutionize and democratize the \$34.8bn4 out-of-home advertising industry for the better. By creating a truly flexible, immediate, measurable self-service platform and open digital screen network, advertisers and media agencies of all sizes will plan and place their adverts through Bidooh.

With no minimum commitment, Bidooh has the capability to unlock a new and much larger customer base of advertisers who are currently unable to use or afford outdoor advertising systems.

Due to the open nature of the network, media owners can add their own existing or new screens to the Bidooh platform and generate new revenues from our existing advertisers. For complete transparency, the Bidooh platform will be auditable on the blockchain. Removing a reliance on trust, delayed or inaccurate reporting, this open digital ledger will be truly revolutionary.

TEAM BIDOOH

Team



Michael Edelson - Chairman

Michael Edelson is a non-executive director of Manchester United Football Club. He is an angel investor, venture capitalist and philanthropist. He has floated more than 20 companies including Asos Plc which now has 2,000 employees and Knutsford Plc which reached an amazing value of over \$1 billion within a month of flotation. The Knutsford story is quoted in many business schools around the world.

Wiki: https://en.wikipedia.org/wiki/Michael_Edelson



Abdul Alim - Co-founder - CEO

Ex local government and Internet security consultant worked as a Technical Consultant at Capita Plc which is one of the UK's biggest government contractors. Was part of the team that built and managed large-scale payment platforms collecting \$1.4bn of monthly payments including TfL (Transport for London) Congestion Charging System, BBC TV Licensing and 220 local government payment platforms.



Shaz Mughal - Co-founder - CPO

Blockchain developer, ex consultant and full-stack software development at the BBC, NHS & JD Williams. Built hyper-scalable enterprise and mobile platforms. Built Bidooh's MVP (Minimum Viable Product) from the ground up.



Garry Partington – Chief Technology Officer

A seasoned business leader and entrepreneur, working across Media, Media Research, Crypto and Technology businesses, and advertising. Delivering successful world leading products to market across all sectors.



Paul Althasen – Non-Executive Director, Investor

Served as Executive Vice President of Euronet Worldwide Inc. until 2012. Also served as Executive Vice President and Joint Managing Director of E-pay Ltd subsequent to Euronet's acquisition. Currently serves on the board of Euronet Worldwide as Non-Executive Director.



Howard Simms – Non-Executive Director, Investor

Educated at Leeds and Oxford University, Howard is the CEO of Apadmi Ventures with more than 15 years' experience in the tech industry.



Hannah Eames - Chief Financial Officer

A chartered accountant with 15+ years of experience in industry, Hannah has worked in marketing and advertising all of her career. From tech PR to one of the UK's leading integrated marketing communications agencies, Hannah brings a wealth of experience with her finance cap on. Hannah is responsible for the financial management and strategy of the business.



Torgeir Hoff – Group Treasurer

A Senior finance & treasury professional, that is always taking continuing professional development seriously. Entrepreneur, BlockChain enthusiast, providing creative solutions to any employer or client.



Simon Murphy – Chief Compliance Officer

Simon brings 15 years+ experience in regulated UK consumer banking & provides International finance solutions for HNWI / Companies & Trusts worldwide. Simon is based in Gibraltar which is fast becoming a leading regulatory hub for blockchain ventures and he provides consultancy to ICOs on compliance & banking functions.



Michelle Cowan - Sales Strategist

20+ years between Apple and Cisco as Account Manager and Client Director. Michelle is heading the global growth strategy for Bidooh.



Graeme Hughes - Commercial Director

An experienced OOH director and sales leader. Ex JCDecaux and ClearChannel which are the largest digital screen owners in the UK. Previously Commercial Director at Titan, Regional Director at Primesight for 10 years, responsible for Sales, Operations and Development.



Darko Ban - Business Development Director

Technology enthusiast and Bidooh believer who has spent his entire professional career within IT industry. 10 years at IBM holding various leadership roles, including account management, crisis management and business development. Currently taking part in expanding the world's most advance DOOH technology.



Adam Rowland - Advertising Manager

Adam heads up Client side advertising throughout the UK. Previous experience with Shopping Mall Media and Yell, focusing on our advertising customer acquisition.



Vicki Simms - Token Community Manager

Previously Head of Customer Sales, Service and Multimedia at Avios, and Head of Operations at AirMiles. Perfectly placed to help manage our token community.



Bren Adams - Digital Marketing Manager

With 20 years experience in the IT & digital transformation industries, Bren has learnt his trade-craft at organisations such as British Telecom and Block. He also consults and advises a number of upcoming digital start-ups.



Muhammad Monsur Ali - Web Development

With experience in branding, web design and development, he has previously worked with digital start-ups and helped develop e-commerce businesses.



Lamaan Ball - Web Development

Over 15 years in professional software development, Lamaan Ball has full lifecycle experience on multiple and varied projects with roles involving team leading, mentoring, technical architecture, requirements gathering, negotiation with clients, UML designs at all levels and programming



Lesley Jones - Bookkeeper

Obtained my diploma in Accounting in 1989 and graduated from Bolton University in 1999. Work experience included DTE Bury, Bunzl Plastics and Crowe Clerk Whitehill. For the past 18 years I have been working directly with Michael Edelson.



Janet Hodcroft - Office Manager

Janet runs the busy Bidooh office, keeping the day to day operations as stress free as possible. Her experience and talents cover many disciplines including bid management, project management, event management and marketing.



Roy Haycock - Technician

Roy has worked alongside Michael Edelson for the past 20+ years . He also assists the technical team in support matters and 1st line troubleshooting



Apadmi - Outsource Development Team

Apadmi's extensive design and development team provide skills overlay and software expertise to complement Bidooh's in-house experts.

Advisors

The experienced board and management team have also brought on some advisors to supplement the experience.



Omar Rahim

Omar has spent the last 12 years in the energy trading space throughout Europe for some of the largest energy companies in the world including Engie and Vattenfall before co-founding EnergiMine in the UK and taking that forward to a successful ICO.



Marcus Hadfield

Marcus was a Managing Partner at McCann Worldgroup. He has eighteen years' experience in advertising and marketing agencies, with clients including Expedia, Costa Coffee, American Airlines, Aldi, World Vision and Argos.



John Townsend

John brings 30 years of financial experience to the team. With a background in Corporate Strategy gained from large "Big 4" firms such as Deloitte, he is responsible for the financial planning of the company. A Chartered Accountant by trade, John has managed the financial affairs of companies and HNWI's across the globe. John recently supported a \$15M ICO which completed its public offering in under 2 hours.

PRESS / MEDIA

Partners



Community Engagement: [Amazix](#)

A group of professional crypto ICO consultants who have technical expertise, are excellent at support and are led by an elite team of managers.

We have managed some of the largest ICOs in history including Bancor, BANKEX and Hdac.



PR Agency: [Luther Pendragon](#)

Luther Pendragon is a well-known London-based communications agency with a 25 year track record of ensuring clients tell their stories to the people that matter.

CROWD.

Influencer Marketing : [Crowd. Agency](#)

CROWD.agency is a new full-service, global influencer marketing division at Crowd Mobile that uses data-driven insights to deliver consistent quality content and ROI. After years of successful influencer marketing execution in the mobile entertainment and youth segment, the day has come that we bring our integrated approach to third-party brands.

APADMI

Core Technology Partner : [Apadmi](#)

One of the leading software development companies in Europe that has developed apps for X-Factor, BBC iPlayer Radio, Argos, The Guardian, Jaguar Land Rover and the NHS. Formed in 2009, Apadmi have grown over the years to offer a wider range of software and development skills across their team.

Boardwalk Studio

Video Production : [Boardwalk Studio](#)

We work with brands, agencies and corporate clients to create commercials, brand films and event content. Based in central Manchester, we are innovative, experienced, creative thinkers and doers.

Coverage

Press and media coverage is available at the following link and will be updated periodically:
<http://wke.lt/w/s/QCphW>

FURTHER READING

Links

Corporate Website: www.bidooh.com

Token Website: www.bidooh.io

Telegram Group: <https://t.me/bidoohio>

Videos: <http://wke.lt/w/s/bCMOu>

References

1. Google Adwords platform <https://adwords.google.com/>
2. Subject to partnerships and/or e-money license & pending app features
3. Bidooh (formerly known as OfferMoments) awards <http://wke.lt/w/s/QCphW>
4. <https://www.statista.com/statistics/273716/global-outdoor-advertising-expenditure/>
5. <https://www.campaignlive.co.uk/article/surge-digital-growth-sustains-global-ooohmarket/1441397>
6. <https://influencermarketinghub.com/internet-advertising-statistics/#toc-0>
7. www.facebook.com/advertising/how-it-works/
8. Data taken from our own clients. Surveyed 50 clients.
9. <https://www.statista.com/statistics/237974/online-advertising-spending-worldwide/>
10. <http://uk.businessinsider.com/pagefair-2017-ad-blocking-report-2017-1?r=US&IR=T>
11. https://en.wikipedia.org/wiki/Michael_Edelson
12. Subject to a 'Know Your Customer' process to ensure our customers are who they say they are. App token feature pending.
13. The digital screen must have the Bidooh software installed. First version of the iOS app is built and ready to submit to the Apple app store.
14. Data by Technavio report 'Global Outdoor Advertising Market 2017-2021'
15. UK Agency Awards 2018

DISCLAIMER

Director's Responsibility Statement

The Directors of Bidooh (Gibraltar) Limited have issued this White Paper and have taken all reasonable care to ensure that the facts stated in this document are true and accurate in all material respects, and that there are no other facts the omission of which would make misleading any statement in the document, whether of facts or of opinion. The Directors accept responsibility accordingly.

Summary of Legal Considerations, Risks and Disclaimers

IMPORTANT NOTICE: Please read the entirety of this "Summary of Legal Considerations, Risks and Disclaimers" section carefully. We recommend you consult a legal, financial, tax or other professional advisor(s) or expert(s) for further guidance prior to participating in the DOOH Token Generation Event outlined in this White Paper. You are strongly advised to take independent legal advice in respect of the legality in your jurisdiction of your participation in the Token Generation Event. You should note that in the Token Sale Terms and Conditions that you will be acknowledging and accepting as part of the process to participate in the DOOH Token Generation Event, you will represent that you have indeed taken independent legal advice.

Please note that this is a summary of the "Legal Considerations, Risks and Disclaimers" document which can be found at <https://bidooh.io/docs/legal.docx> and which you must read in full before: (i) making use of this White Paper and any and all information available on Bidooh (Gibraltar) Limited's (the "Company" or "Bidooh") website at <https://bidooh.io> (the "Website") and/or (ii) participating in the Company's token generation event outlined in this White Paper (the "Token Generation Event"). Any undefined capitalized terms below shall have the meaning set out in the "Legal Considerations, Risks and Disclaimer" paper. This summary should not be relied on in place of reading the "Legal Considerations, Risks and Disclaimers" paper in full. The information in this White Paper and all information available on the Website shall hereinafter be referred to as the "Available Information".

The "Legal Considerations, Risks and Disclaimers" paper, the full version of which was mentioned above, applies to the Available Information. The contents of the "Legal Considerations, Risks and Disclaimers" paper outlines the terms and conditions applicable to you in connection with (i) your use of any and all Available Information; and/or (ii) your participation in the Token Generation Event, in each case in addition to any other terms and conditions that we may publish from time to time relating to the Token Generation Event (such terms hereinafter referred to as the "Terms").

This White Paper states the current views of the Company concerning the Bidooh Blockchain platform and related matters. The Company may from time to time revise this White Paper in any respect without notice. The information entered in this White Paper is indicative only and is not legally binding on the Company or any other party. This document is for informational purposes only and does not constitute and is not intended to be an offer to sell, a solicitation of an offer to buy, or a recommendation of: (i) the Company, (ii) an investment in the Bidooh Blockchain Platform or any project or property of the Company, or (iii) shares or other securities in the Company or any affiliated or associated company in any jurisdiction.

The information set forth in the “Legal Considerations, Risks and Disclaimers” paper may not be exhaustive and does not imply any elements of a contractual relationship. While we make every reasonable effort to ensure that all Available Information is accurate and up to date, such material in no way constitutes professional advice. Individuals intending to participate in the Token Generation Event should seek independent professional advice prior to acting on any of the Available Information.

The Company does not recommend purchasing Tokens for speculative investment purposes. Tokens do not entitle you to any equity, governance, voting or similar right or entitlement in the Company or in any of its affiliated companies. Tokens are sold as digital assets, similar to downloadable software, digital music and the like. The Company does not recommend that you purchase Tokens unless you have prior experience with cryptographic tokens, blockchain-based software and distributed ledger technology and unless you have taken independent professional advice.

Citizens, nationals, residents (tax or otherwise), green card holders and/or Restricted Persons of any Restricted Jurisdiction shall not process the Available Information and are prohibited from participating in the Token Generation Event or the purchase of Tokens or any such similar activity.

In no event shall the Company or any current or former Company Representatives be liable for the Excluded Liability Matters.

The Company does not make or purport to make, and hereby disclaims, any representation, warranty or undertaking in any form whatsoever to any entity or person, including any representation, warranty or undertaking in relation to the truth, accuracy and completeness of any of the information set out in the Available Information.

You should carefully consider and evaluate each of the risk factors and all other information contained in the Terms before deciding to participate in the Token Generation Event.

This White Paper may be translated to different languages but in the event of a conflict between documents, the English version of the White Paper will prevail.

bidooh



Bidooh (Gibraltar) Limited,
57/63 Line Wall Road,
Gibraltar