

Version 3



A BLOCKCHAIN-BASED EVENT TICKETING PROTOCOL

MAXWELL MAYHEW & DYLAN HAUPERT

W H I T E P A P E R

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1.1 Introduction

UTIX is an online, decentralised event hosting and e-ticketing platform that utilises smart contracts to reduce market inefficiencies and provide event organisers (EO) with variables they conventionally would not be able to control. Users and event organisers can buy or sell tickets through cryptographic signatures stored on a blockchain that cannot be altered or destroyed, removing the requirement of centralized servers, over-reliance on costly third parties and other negative externalities that arise through an unregulated free market mechanism.

UTIX, through our own protocol, can lend tokens to an event organiser to be distributed to a user when a ticket to their event is purchased. Through our user-friendly interface, an event organiser/user will have all the functionality of a blockchain, without the added complexities typically involved. By utilising smart contracts, we can reduce complication, cost, and minimize the threat of fraud.

1.2 Industry Overview

The ticketing industry has various layers, the first of which is the **Primary Market**, the exchange that facilitates transfers directly between event organisers (or artists) and the consumer. Tickets within the primary market have parameters closely controlled, event organisers can set price or 'face value', volume/quantity available at specific dates and the outlets for distribution (online platforms, such as Ticketmaster, etc). Generally, this marketplace is relatively efficient. It is, however, predominantly a monopoly. Monopolistic, not that one firm typically controls the majority of the market; however, usually an event organiser will place tickets on sale with one specific platform (Ticketmaster for example), they then have a monopoly over that specific event (A-list concert) and can set their 'transaction fee' prices as they see fit, with little regard to market competition. This is **not** always the case, it is though, an issue and one that should be noted.

The second layer is the **Secondary Market**, an unregulated, uncontrolled market whereby the tickets purchased on the primary market are re-sold on other platforms, through social media and word of mouth. It is here that most of the inefficiencies, failures and fraud occurs. Demand is treated as 'inelastic', regardless of price, ultimately the tickets will sell out, meaning secondary suppliers are able to sharply increase price as well as the cost of purchasing the ticket (or the transaction fee). Tickets typically are purchased in bulk on the primary market, then sold often for extortionate prices. Event organisers in the primary market have very limited control over this market, as well as no monetary gain from its existence. Secondary sites include *Getmein*, *Seatwave*, *Stubhub* and *Viagogo*; one example showed *Viagogo* charging 34.09% of the ticket cost to facilitate the transaction for an Ed Sheeran event on the 7th April 2017¹. Occasionally fake tickets also appear on

¹ <https://www.independent.co.uk/arts-entertainment/music/features/vianono-how-the-secondary-ticketing-market-is-bleeding-fans-dry-and-the-bands-trying-to-stop-them-a7671351.html>

sites, Action Fraud in the UK noted that between May and October 2017, consumers lost £1.66 million in fraudulent tickets². This is clearly a market failure, in need of correction.

1.3 Current problems

Is the e-ticketing industry categorically working in the most efficient and effective manner, or, is there true demand for a product such as UTIX to protect consumers and allow event organisers to re-gain control of their brand? Jason Robert stated “...*event organisers establish costly subsidies and artificial deals to maximize revenue and minimize risk, ultimately hurting the entire event financing process*”³ clearly there are inefficiencies that require intervention.

- **Bots currently restrict primary market distribution** – algorithmic scripts are utilized to purchase all available tickets at any one time for an event, forcing them immediately onto the secondary market. Attempts have been made to curb this practice (BOTS Act of 2016, introduced by the US), however, this is unlikely to establish any significant change in the industry.
- **Artists are attempting to take these issues into their own hands** – In 2017, Taylor Swift introduced a system whereby verified fans would be the first consumers that would be able to purchase tickets. Similarly, Bruce Springsteen introduced a similar system with *Ticketmaster* to ensure that true fans were the only individuals able to purchase tickets. This is an abstract concept, and an extremely costly one, a ‘solution’ that shouldn’t be required. **Artists should not be the parties responsible for regulating the e-ticketing market.**
- **Ticket prices become unaffordable** – the secondary (and at times, the primary market) can charge exceptionally high transactional costs, when, it can be extremely cost efficient to facilitate these forms of transactions. Consumers are also charged extortionate mark-ups on the initial face value of a ticket in the secondary market, the average mark-up is 49%, though the margins sometimes have exceeded 1000%⁴.
- **Fraud is extremely difficult to control in the secondary market** – Tickets can appear on several mediums in the secondary market; conventional portals such as *Stubhub* or *Viagogo*; they can also appear on platforms much more difficult to control, such as social media. When a ticket is sold on a secondary market platform, the resellers typically fail to remove that same ticket from other platforms it has been listed. This results in a single ticket potentially being sold to numerous parties.

² <https://www.thestage.co.uk/news/2018/rising-ticket-fraud-costs-audiences-1-6m-in-2017>

³ https://motherboard.vice.com/en_us/article/mgxb8/the-man-who-broke-ticketmaster

⁴ <https://www.consumerreports.org/money/why-ticket-prices-are-going-through-the-roof/>

"Bots are one piece of the puzzle, but a lot of the industry operates in nakedly improper ways"

1.4 Existing Solutions

There are some solutions that already exist to reduce this level of market failure and attempt to control the secondary market. The US introduced an Act to try and prevent algorithms control the market supply/price of tickets, the BOTS Act in 2016. The UK introduced the Digital Economy Act in 2017, making it a criminal offence to use automated technology to purchase large amounts of tickets to then be sold at a premium. Although legislation should in theory, help reduce the inefficiencies, it is almost impossible to control points of distribution (individuals outside stadiums, social media, word of mouth, etc.).

As mentioned previously, artists have also taken matters into their own hands, attempting to somehow verify legitimate fans and allow only these individuals to purchase tickets. However, in practice it appears quite difficult to conclude whether an individual is truly someone who does or does not like an artist's music. This can be quite an exclusionary procedure, and a costly one that still does not correct all issues addressed above.

One method that appears to have at least addressed re-sale prices and the problem of algorithms purchasing in bulk, is the practice adopted by football teams, ticket re-sales are strictly forbidden. Although partially correcting market failure, this can create issues previously not present. A legitimate ticket holder that can no longer attend the event, is unable to redeem any of his investment into a ticket, and therefore can create an unnecessary consumer deficit.

1.5 UTIX Solution

The UTIX solution is to enable users and event organisers to seamlessly use smart contracts on the Ethereum network to control each of the variables that ultimately lead to market inefficiency. The UTIX protocol eliminates any possibility of counterfeit tickets being sold, ensures that secondary pricing can be controlled and allows the event organiser to enjoy all the benefits of using a blockchain system, without the complexities involved.



2.0 UTX Protocol

The UTX Protocol is significantly different to alternative blockchain based event systems currently available on the market. The blockchain itself will be built on Ethereum, a system that allows for practical and effective uses of smart contracts. The smart contracts will facilitate transfers between the UTX Reserve Fund (RF), the event organiser, users, and secondary ticket purchasers.

Traditionally, in other blockchain ticketing models, event organisers or individuals that decide to host events through the software available, must purchase the tokens of the software provider they plan to use. The purpose of this is to allow these tokens to be used as markers on the blockchain upon the sale of a ticket, to show organisers who has purchased a ticket, and where that ticket ultimately ends up. This is an immediate disincentive for many event organisers, typically hosting an event is expensive. Advertising, paying an artist, renting a venue etc, all adds up. By forcing event organisers to pay to host an event, you are likely to drive away most of your traffic to sites that are completely free for that party. The UTX protocol ensures it always remains free for event organisers to use.

2.1 Platform

Upon signing up to the UTX platform, a UTX token wallet is automatically generated and assigned to each user. Users will be required to verify their phone number, email address and we will potentially require ID, allowing for further user verification at event entry points. Users have the choice of signing up as an EO, or a user. The purpose of this wallet generation is to allow UTX tokens to flow through the protocol and allow event organisers to control all aspects of their event, to benefit entirely from the blockchain.

2.2 Reserve Fund

The UTIX protocol can facilitate this cost-free mechanism by introducing the Reserve Fund. The reserve fund is a wallet controlled by UTIX that holds a number of tokens that are distributed and redeemed following an event, ensuring stability in the number of tokens in that specific wallet. This is completed using smart contracts. When an EO decides to host an event, a smart contract is established that allows that specific EO to only distribute tokens lent to them by the reserve fund, to users that decide to purchase tickets. Upon completion of the event, these tokens move from the user's wallet, back into the reserve fund to ensure a constant level of tokens held.

2.3 Event Creation

When an event organizer creates their account on the UTIX platform their identity, email and telephone numbers will be verified; following this, a secure UTIX crypto-wallet is created for them in the background.

Ticket Creation:

Following registration, when an event organiser creates an event, they have the option to create tickets containing several different variables, including (but not limited to):

- Name (name of that specific ticket type)
- Number of tickets for distribution
- Price (of each type of ticket individually)
- Distribution release date (and time)
- Distribution end date (and time)
- Refundable
- Re-distributable (can they be sold on the secondary market?)
- Maximum/minimum re-sale price (if desired)

After having successfully created an event, a number of UTIX tokens are transferred to their wallets, the amount corresponding to the number of tickets they have created. Event organisers will have a full breakdown of their events analytics, including how many/which type of tickets have been sold, how many are remaining, even down to gender analytics.

Each time an event is created, the UTIX smart-contract is called and will transfer UTIX tokens to the organisers wallet. When a user purchases a ticket, the contract is then called to transfer tokens, in the amount that the user has purchased tickets, to the user's wallet (set up on registration).

Once an event has ended all tokens from the clients' wallets and all unused tickets from the organizer's wallet will be transferred back to the reserve fund. All without the users of the protocol having to interact or realise they are using an integrated blockchain system, but still providing a transparent, trackable, and controlled e-ticketing system.

2.4 Secondary Market Control

One of the primary benefits of adopting the Ethereum blockchain is that by utilising smart-contracts, we can ensure that certain facets of the e-ticketing infrastructure that previously had created issues, are now controllable. One of these problems was the secondary market.

Event organisers will now be able to set a maximum re-sale value, whereby users are only able to sell their tickets through the platform itself and only at a price the event organiser dictates. We must stress, **this is a choice the organiser controls**, if they'd prefer that tickets can freely be sold at whatever price is demanded, they have this option.

To facilitate these additional variables, our aim is to use smart-contracts that allow the ticket/token to only be re-distributed at a price set by the organiser when creating their event. Tickets are only transferrable through the application and/or website. We recognise that any system is not entirely infallible; there will likely be individuals that try and create loopholes to facilitate the extortion of fans, however we aim to make that as difficult as physically possible. We will do so via our event entry methods.

2.5 Secondary Market Distribution Methods

The event organiser has the option to control certain variables of the re-distribution of tickets. Event organisers can choose between allowing or restricting the free movement of tickets between users, or if they'd prefer, tickets that users no longer need or want can (only, if desired) be re-listed on the platform for any user to purchase.

- Ticket Exchange – To allow a user to transfer a ticket to another user, both should have registered and verified their accounts on the UTIX platform, ensuring both have UTIX addresses. Exchanging tickets through the platform eliminates counterfeit risk and is simple as the token is simply sent to the third parties address. Our smart-contract at this point is called upon, and the ticket is transferred only as the payment is made. Ensuring both parties follow through with their end of the agreement.
- Ticket Re-listing – Similarly to the Ticket Exchange, the smart-contract is called upon to ensure that each party receives the consideration at stake. If a user decides they wish to sell their ticket, they can simply log onto the platform and click to have it re-listed. If the EO has provided the option that a premium can be paid, the user can include the higher price, should they wish. A transactional fee will still be required and will be covered by the secondary market buyer. Our aim is to make this process as simple, cost-efficient, and effective for each party.

2.6 Event Entry Methods

Our event entry methods are designed to minimise secondary market extortion and the threat of fraud. Although our aim is to develop each and every method listed below, we will strive to find the most effective and efficient of the choices available and develop it further alongside leading event organisers.

- QR Code 2FA – QR code two-factor authentication is not something that has been used at events. Iterations have been designed in the past, however nothing has succeeded entirely. The UTIX app will have a tab highlighting the tickets each user has available. Upon entry to the event, and QR code ticket will become available. This code only allows access to the second QR code that will facilitate entry, the first is simply a verification procedure to show that the individual on the app is the true owner of the ticket. This can stop the practice of users taking a screenshot of their QR coded ticket, sending it to the secondary buyer and then charging an extortionate fee for the ticket. Our development versions of IOS/Android scanners have been extremely fast, and we feel strongly that the need to scan two QR codes will not add any substantial time to the event entry process. Statistics show that 95% of Americans own a mobile telephone of some kind, and that 77% of Americans own smart phones. We therefore feel as though the application itself will be a primary means of access.
- Timed Entry System – A second method we have tested and will offer as an option to event organisers is the choice to have the QR code withheld until a certain amount of time before the event itself. The purpose of this is to deter ticket touts from waiting outside events, printing QR codes and selling the tickets in an unregulated manner for prices that far exceed the original face value. Combined with QR code 2FA, we feel this could be extremely powerful in minimising the risks associated with the secondary market to consumer. However, this remains a choice for event organisers, should they wish to allow secondary pricing and the free market mechanism to operate entirely, they have that option. The event organiser will have the choice to only allow the QR code to be viewed 20/30/45/60 minutes before the event itself, giving the secondary market only a very small window in which to operate. Although it still provides a very small window for touts to operate, it largely acts as a deterrent. Touts could ultimately end up losing money on tickets they have purchased but are unable to sell.
- Paper Entry – It is still very much the case that individuals will want to use printed tickets. It is rare, but an option we must evaluate nonetheless. In this case, the user will still have to have an account on the UTIX platform, with their ID, email and telephone number verified. Before the event, the user must have selected to receive a paper ticket, and one will be emailed 24 hours before the event commences. Upon entry, the QR code will be scanned and an ID verification will take place. This will either consist of:

- A manual verification by the event validator, using their own judgement as a photo of the user will appear on the scanning application. It is down to their discretion as to whether this user is legitimate or could in fact be using a duplicate fraudulent ticket.
- Automated system using the camera on the device using the event entry software. Upon scanning the paper ticket, the application will recognise it is not a smart-ticket and open the camera with a box to align the users face. If authentication fails, the validator has the choice to revert to a manual verification.

2.7 Protocol Fee Structure

Description	Variable	Cost (estimate)
Wallet Creation Cost	Y	-
Merchant Transactional Cost	A	2.4%
Ticket Creation Cost	X	\$0.03
Protocol Cost	I	\$0.5
Current UTIX Price	P	-
Interest charged for Lending to EO	R	3%
Cost of Token Movement (RF – EO – USER)	F	\$0.05 – 0.15
Number of Tickets Purchased	N	-
Ticket Cost	C	-

Transactional Fee Calculation for a Primary Ticket Purchaser

$$\sum [Y + X + I + F + ([1 + R] \cdot P) - P + (C \cdot [1 + A] - C)] \cdot N$$

This is the theoretical fee structure for a primary ticket purchaser. It is subject to change; however, our intention and aim is to keep this fee as low as physically possible. Competitors generally use a percentage of the ticket price to dictate the transactional cost; considering the cost of such a transaction is relatively low (especially when

considering economies of scale), this seems an expensive and inefficient way to calculate cost.

There will be additional costs to a secondary market purchaser. Primarily the cost of transferring the token from primary to secondary, with the additional ancillary cost of creating a wallet and the movement of the token through the UTIX eco-system. We will endeavour to keep these costs as low as possible whilst still providing value to our stakeholders.

It is also important to note our applications (IOS/Android, at present) will always be free. Scanning of tickets will also be cost-free for event organisers.



3.0 UTIX Token

The UTIX token is essential for the UTIX protocol to function, allowing the flow of tokens through our eco-system from EO, to user, almost entirely cost free. To allow event organisers to utilise the benefits of blockchain technology, they require a token that can be tracked for several reasons, including the necessity to reduce fraud.

Some primary cases for the token are:

1) Event hosting:

To reduce the cost to EO's, and ensure for them, UTIX remains completely free, we must have the ability to lend these tokens to EO's for distribution, allowing them to control secondary pricing, track legitimate tickets and combat against increasingly sophisticated algorithmic software. The token allows for legitimacy, ensuring users do not lose money purchasing fraudulent tickets.

2) Secondary Market Control:

Tickets sold on the secondary market through the UTIX protocol are closely controlled by the event organiser using the token. A smart contract is generated when the user first purchases the ticket, indicating the maximum value in % terms that it can be re-sold, set by the event organiser when setting up the event itself. The cost of executing each smart contract is always made the onus of the user making the purchase. Purchases can be made in Ethereum, Bitcoin or several FIAT currencies, using 3rd party merchant providers, and the cost of executing these contracts to sustain and maintain control will be included in the transactional fee added to the purchase of a ticket. Buyers and sellers will be matched, as they both highlight their demand to sell and/or purchase a ticket. This nullifies the requirement for one party to pay capital up front for a transaction that may ultimately not be executed, as with other blockchain ticket providers.

3) Loyalty Reward System

Although initially, after the end of an event coins held by users to show the legitimacy of their ticket are returned to the reserve fund for re-distribution, later phases of the UTIX protocol allow for the tokens they hold to be stored on their

own account, and re-used for discounts, and even to purchase tickets. Our aim is to maintain users, to establish a strong base of loyal event organisers and users, who can build up their tokens as they purchase tickets for more events and use these tokens for future discounts and other offers.

4) Rewarding early adopters/backers

The UTIX token provides the opportunity to not only fulfil the funding requirements of a project of this scale but allows for the early adopters to benefit as the platform grows in users and events. Our aim is to develop the token to become an all-encompassing event eco-system, enabling users to benefit from discounts, to purchase merchandise etc at events.

3.1 UTIX Platform Development Road Map

The ability to provide, promote and distribute online e-tickets using the technology and power that the blockchain lends creates a wealth of different opportunities and value-added services we can integrate into the UTIX platform. Despite this, it is important to recognise that we should and will build incrementally. Attempting to push each feature we could want into the first iteration of the platform will be time-consuming, fraught with issues and will over-complicate an already successful system and deter users. We will therefore move in different phases to achieve our goals.

3.2 Phase 1

Our aim is to build on our already functional blockchain e-ticketing platform by creating a scalable, user friendly interface that fundamentally ensures a more seamless and cost-efficient alternative to the current non-blockchain platforms. Phase 1 will aim to accomplish:

1. Development of an Android/iOS consumer/producer application, allowing for purchasing and event creation, as well as event entry. We aim to ensure that UTIX is as simple to use as all other non-blockchain substitutes. Users purchasing/interacting with their smart tickets should never be confronted with consequences of token price volatility or security flaws.
2. Android/iOS scanner application and back-end for producers, allowing them to monitor, manage and verify the legitimacy of users and tickets via a handheld smart device. Many e-ticket platforms create direct costs to event organisers by only allowing entry via a smart device if a fee is paid for a physical handheld mobile scanner⁵. Our experience within the e-ticketing

⁵ <https://eventsmart.com/features/barcode-qr-code-ticket-scanning/>

industry has shown that charging a producer up-front creates a deterrent, but the use of IOS/Android scanners is more efficient, effective and are just as capable as their costly alternatives.

3. Full development of the public platform. Testing of live events through the platform and an aim to ensure we have a strong base of loyal event organisers that continue to use the site for each of their events. We have an exceptional sales team and strongly believe their skills and capabilities will highlight the public the value our technology offers.
4. Agent/Artist log in system. Within the event market, it isn't always the artist or event organiser that physically set up an event on an online e-ticketing platform, from time to time it is a third/fourth party, a promoter. Our experience within the e-ticketing industry is that transparency is one of the most paramount features all parties desire. Whether it is transparency with regard to the amount of tickets sold, or a full breakdown of event analytics, we will endeavour to ensure that each and every user that is granted access by the user that creates an event, has access to this data. This way artists can never be tricked or fooled about how many tickets have been sold. Promoters or agents can delegate user access to PR teams, so they can identify areas that tickets may not be selling as well, allowing them to increase their marketing in that region to compensate. We will give the event originator the ability to assign this access (and control it) to users, allowing full transparency to every cog in the event organisation wheel, maximising your events success!
5. Data. We must fall in line with European and worldwide data regulations, including the recent implementation of the Guide to the General Data Protection Regulation. Those users that opt in to have their data kept/stored will be sharing this information with the event organisers they purchase tickets from. Data to an event organiser, promoter etc. is extremely valuable, it shows who their audience is, who an artist truly appeals to, it is information that is key to the success of future events. Providing users allow us to share their information with organisers, EO's will have access to this.

3.3 Phase 2

The second phase aims to establish ourselves as one of the main actors within the e-ticketing industry. Our intent is to reward those users who continue to use the protocol, both event organisers and consumers by enabling full access to the UTIX smart-wallets held in each users account.

1. The introduction of our loyalty system will see the tokens purchased by users remaining in their wallets and allowing for purchasing with the UTIX token and use of the token to redeem offers and discounts hosted by event organisers. To achieve this, we will partner with exchanges allowing for a seamless

exchange of UTIX to other currencies and fundamentally alter the structure of the reserve fund to allow for fractions of UTIX coins to be substituted for entire coins, as well as introducing a system that replenishes the reserve fund from the open market.

2. Development of an API that would allow seamless integration with 3rd party applications and websites. Most events around the world prefer to host all the relevant information regarding their event from one localised point, their website. By creating an API that allows for integration easily with applications and websites, we can allow producers to benefit from the control and security the UTIX protocol provides without having users ever leave their site.
3. UTIX as a functional currency. We want to create incentives for those users that decide to use the UTIX token over FIAT currencies, and we want that decision to be a simple one, and a decision that can be effected easily, without thought. As straightforward as handing physical cash over at a bar. In our second phase, our development team will focus on creating an apple pay/android pay type system whereby users can use their smartphone to easily make purchases at events; simultaneously, we will endeavour to create a structure whereby event organisers can see the benefit of utilising blockchain technology for merchandise, beverages, food etc at events and/or festivals.



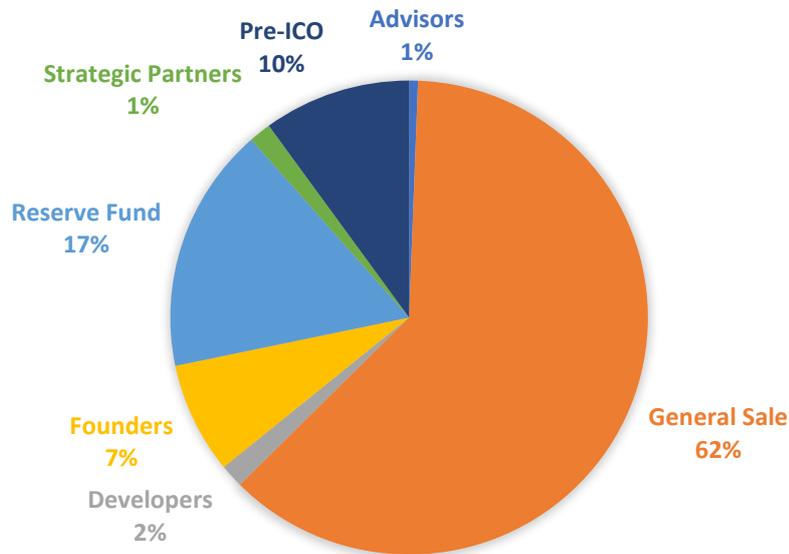
4.0 ICO Details

Details of the ICO – The goal of the ICO is to exchange UTIX for Ether (ETH) for an equivalent in \$1,500,000 at minimum and \$18,000,000 at maximum. The exchange of UTIX for ETH will be facilitated using smart contracts. The UTIX ICO smart-contracts have been audited by CinderCloud. Info on this audit can be found at www.UTIX.io.

Crowdsale Contract Details

- *Total Token Supply: 250 million UTIX tokens.*
- *Minimum financing: \$1.5 million.*
- *Maximum financing: \$18 million.*
- *Pre-Sale Coins available: 25 million*
- *General Sale: 155 million*
- *Pre-ICO Start Date: 1st October 2018*
- *ICO End Date: 31st January 2019*
- *Token Price: \$0.1 = Price in Ethereum is dependent on current market price and will fluctuate due to the use of an Oracle.*
- *Tokens will be non-transferable until the ICO ends.*
- *During the Pre-ICO, 25,000,000 tokens will be available at a 40% discount.*
- *Stage 1 will consist of 55,000,000 available at a 20% discount.*
- *Stage 2 will consist of 40,000,000 available at a 10% discount.*
- *Stage 3 will consist of 20,000,000 available at a 5% discount.*
- *The final stage will occur without a discount, all remaining coins unsold will be burnt.*

TOKEN ALLOCATION



The UTIX token is coded to ensure they cannot be transferred or moved to another address until the ICO has ended. This allows for the UTIX team to determine whether the ICO was conducted in a fair and orderly way. There will be **only one** UTIX ICO. The tokens issued during this ICO will be the only UTIX tokens ever to be issued by the protocol. All tokens issued to the founders will be vested over 24 months, with 25% released every 6 months.

4.1 Strategic Partner Token Allocation

A number of tokens designated for the public crowdsale have been allocated to strategic partners of UTIX. These partners share long term goals and incentives with UTIX and a vesting period will be in place whereby they will only have access to these tokens if certain conditions are met (x amount of events listed through the site, for example).

The wallet address containing the ETH raised in exchange for UTIX tokens during the public and pre-sale will be made public.

For security of all funds and to maintain investor confidence, we will be using Gnosis Multisig wallets **only**

4.2 Budget Allocation

The amount of time it will take to fully develop a scalable and functional version of the UTIX protocol laid out within this white paper is dependent entirely on the volume of ETH exchanged for UTIX tokens during the ICO. Our expectation is should we reach the

minimum funding, the first version of the protocol will be available for wide scale commercial use by the end of 2018, considering the foundation of the blockchain protocol and e-ticketing software have already been developed. However, should the ICO be funded completely, our expectation is to have the protocol available much faster.

UTIX Protocol and Platform Development:

60% of the budget will be directed immediately to the research, development, and growth of the UTX platform. Our development team would grow incrementally according to the needs of the project.

Sales and Marketing:

22% of the budget will be allocated for the hiring of promotional and sales staff to ensure that when our platform is ready, we have a strong base of event organisers ready to drive sales and utility immediately.

Operations:

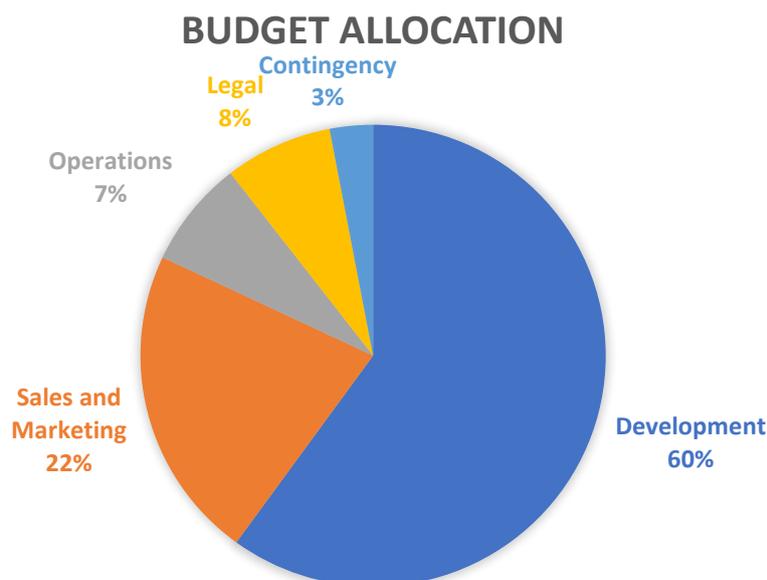
7% of the budget will be allocated towards operational costs (admin, security, overheads, hosting etc.).

Legal, Accountancy and Insurance:

8% of the budget is allocated towards retaining legal and accounting representation. It will also cover insurance expenses for the protocol.

Contingency:

3% will be set aside for unforeseen costs/force majeure.



4.4 Management Team

Max Mayhew | Founder

Max earned his Bachelor of Science in Industrial Economics from the University of Nottingham, then continuing his education at the Chartered Institute of Securities and Investment to become an RDR compliant advisor. Max was the head of trading for the Ceres Fund, a quantitative fund in Europe. However, his main passion has always been ticketing. In 2013, he founded the online e-ticketing platform ClubCo. The experience and knowledge gained from ClubCo will lead the UTIX team in building a platform that artists, users, and event organisers can feel confident and proud to use.

Dylan Haupert | Founder

Dylan is one of the three UTIX original founders. Having studied Economics and Computer Science at Florida Atlantic University, Dylan has a vast array of experience in both computer engineering and marketing; having head-up the marketing team at Mako Marketing for two years. Recently, Dylan focused on the blockchain architecture, mining engineering and its deployment in products around the world. Dylan was also one of the founders of the e-ticketing website ClubCo in 2013, he has an extremely thorough understanding of the online ticketing landscape.

Mihkel Tali | Head of Back-End Development

Mihkel is an extremely passionate developer that does not stop until he has a full understanding and grasp of the task or undertaking ahead. Mihkel studied Economics at the University of Tartu, whilst also attending the Estonian IT college to major in software development. Mihkel has worked for various hedge funds developing equity and currency statistical arbitrage algorithms, and is also the co-founder of Driftband, a company that produces variable types of wearable technology. Driftband won an acclaimed product development award in Estonia, issued by Teamlab.

Kris Pakala | Head of Front-End Development

Kris is a full stack developer, with a breadth of knowledge. He studied computer science and engineering at the Sri Venkateswara University and completed his master's in Computer Science and Automation and the prestigious Indian Institute of Science. Kris has worked as a software architect for hedge funds around the world, using TCP/IP technologies and socket programming and is extremely proficient in C++. Python, Java, Microsoft SQL, AJAX and much more. We are very fortunate to have him as part of our team.

Jerome Robinson | Community Specialist Manager

Jerome completed a bachelor's in network engineering at University, enabling a thorough understanding of the product UTIX is building. Jerome also holds a degree in Psychology from Lewis University and provides an invaluable service to our users. Jerome is passionate about the client experience and plays one of the most important roles within the UTIX team, Jerome is the direct liaison between our clients/users and the UTIX ecosystem. Towering at 6 foot,7; Jerome is our rock, a very well-read individual.

For more information about all of our staff, please visit [UTIX.IO](https://www.utix.io).



5.0 References

1. <https://www.independent.co.uk/arts-entertainment/music/features/vianono-how-the-secondary-ticketing-market-is-bleeding-fans-dry-and-the-bands-trying-to-stop-them-a7671351.html>
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