Gilgam.es WHITEPAPER

an Ethereum-based, OS-independent eSports platform

Version: 2.0.4.

Abstract

Gilgam.es is planning and preparing to launch a platform allowing both individual players and teams to compete in popular eSport games – DOTA2, League of Legends, Counter Strike: Global Offense, Call of Duty, etc... –, supervised by our own artificial intelligence.

Security of players

The biggest problem in every online game is cheating, either financially (credit card frauds) or in-game cheating. We aim to eliminate the risk of the former by decentralizing transactions on the basis of ethereum blockchain; while in case of the latter, we are planning to eliminate in-game cheating by means of strict KYC[1] software monitoring, using our own artificial intelligence.

Decentralization

Financial transactions of players will be conducted by smart contracts running on Ethereum blockchain, the execution of which cannot be manipulated externally, thus they are executed in accordance with pre-coded outcomes. (Filtering financial cheating)

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[1] **Know your customer** (KYC) is the process of a business verifying the identity of its clients. The term is also used to refer to the bank regulation which governs these activities.

Automated

The artificial intelligence developed by us will analyze the outcome of every match and determine the result of the game. Parties may accept this outcome or place their complaints.
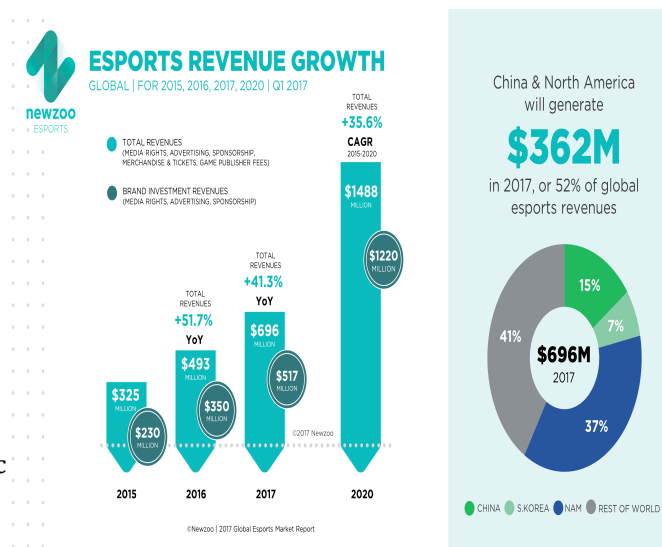
MARKET

WHY ESPORTS IS A FACTOR TO COUNT WITH

It is no novelty any more that ESports is one of the fastest-growing businesses worldwide. Not only as an individual industry, but as a core element underlying several other industries and businesses as well. While earlier times saw gamers themselves in the focus of publishers' attention, who spent their money on their products, and little else could be capitalized on, now game publishers, media, entertainment and betting companies alike capitalize on the success of games and the entertainment of the gaming community. Big media and broadcast names have joined the scene, such as ESPN, while Amazon has acquired the market-leading online live streaming platform Twitch. To put it short, in recent years, eSports have become a key element in the gaming industry, with a lot of attention and involvement from several other industries and businesses. According to analysts, ESports is still a relatively new and budding industry, with a huge degree of commercial opportunity to utilize, with a variety of revenues companies would be able to tap into. Its market is undervalued yet, and still has significant room to grow[2].

Estimated revenues:

ESports tournaments and competitions have become a key priority for market-leading MOBA and FPS games, having earned a yearly 1.6 bn USD. According to Newzoo's


ESPORTS REVENUE GROWTH
GLOBAL | FOR 2015, 2016, 2017, 2020 | Q1 2017

China & North America will generate **$362M** in 2017, or 52% of global esports revenues

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2   http://www.businessinsider.c
3

annual report[3], the ESports market will generate approximately 700M USD in 2017; with brands contributing about 500 million (cca. 150M on advertising, 260M on sponsorship, and about 100M on media rights); with a year-on-year growth of more than 40%. It is also forecast that brand investment will double by 2020. Expected consumer spending on tickets and merchandise is estimated to more than 60 million USD. Game publishers are expected to spend more than $100M by means of partnership deals with white-label organizers.

The above data only account for eSports in a narrow sense, including advertising, media, sponsorship, advertising, tournaments, merchandising and ticket sales, it does not include betting as a completely separate industry, although since the biggest betting companies have started to embrace eSports, it is highly possible that the revenue from eSports betting is already much higher than the revenues of the whole eSports market. For example, while the NFL generated a revenue of 13 bn USD in 2016, betting and fantasy leagues around the NFL games are estimated to have generated more than 50 bn USD. However, more and more platforms either embed betting options from third parties or integrate them in their applications. Exactly because of this double trend, it is very difficult to give an accurate estimate of the revenues originating from betting or gambling worldwide.

The audience

The above report estimates the number of the global eSports audience to reach 385 million this year, with more than 190M enthusiasts among them. However fast-growing and expanding this market is, there still are some niches to be filled and opportunities to be part of this revolutionary growth. Professional

gamers have reached quasi celebrity status nowadays, earning huge amounts by playing, with millions watching them play, knowing their names and stats and idolizing them, thanks to massive streaming and broadcasting of ESports

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3   https://newzoo.com/insights/articles/esports-revenues-will-reach-696-million-in-2017/
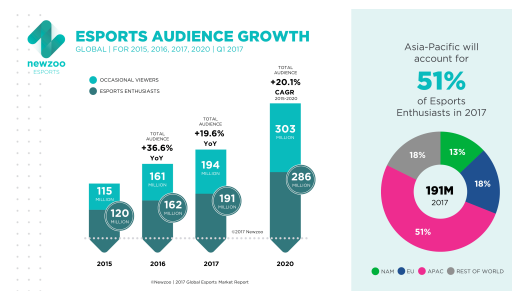
tournaments, to an extent that leads industry experts to predict that the number off viewers might easily overcome the number of actual players. It also can be owed to the fact that most tournaments are organized for pro gamers with prize pools of millions of dollars, or at most semi-professionals, while average gamers playing as a form of leisure or hobby has less and less chance to try themselves in competitions. Thus, there is an excellent opportunity to fill that niche by a platform which offers opportunities for less experienced players as well, not only in terms of competing each other but of winning money prizes, too.

Another key problem in the industry is cheating; both in financial terms and game-wise. Several solutions have been attempted and various approaches have been born to tackle this issue; however, honest gamers still crave for a solution that keeps both their wallets and their prestige intact and lets them compete in a safe and secure environment.

Potential platform volume

Our solution for providing an opportunity for everyone: to play in a safe and secure environment, in AI-supervised games on our servers, which are guaranteed to be free of cheating.

Opportunities

The global e-sport market is expecting a huge growth. According to forecasts, a 37% growth is expected in 2017. By 2018, the expected total income is $1.92B. In this expanding market, every third fan wishes to take part in tournaments as a player. With regard to the above data, estimating the market share of Gilgam.es platform at 1%, the expected revenue is:

Estimated daily revenue on the basis of current data

Game	Players (concurrent)[4]	Daily volume

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[4]   Number of players at any time

Counter-Strike: Global Offense	600 000[5]	$288 000[6]
DOTA2	800000	$384 000
League of Legends	7 100 000	$3 408 000
Total:	8 500 000	$4 080 000

The expected monthly revenue of the Gilgam.es platform in 2018: $122.4M

Further opportunities

The platform implies the opportunity to keep its steady growth by integrating further games, while the modular structure of the platform allows for integrating new functions. As the first step, based on the statistics of the users of the platform, we are planning to embed a betting module, which would enhance the profitability of the platform. Thus the holders of the tokens could take part in betting events.

APP TOKENS

The tokens issued by Gilgam.es can be used in the following main areas:

- playing in matches and win further tokens,
- ranking rewards,
- vetoing debated match results,
- organizing private tournaments,
- betting events (later),
- Coinflip, jackpot(inventory elements) (later),
- selling / buying inventory elements (later),
- referral rewards

Token acquisition

GGS as a utility token will be the sole means of carrying out transactions within the platform. GGS can be bought through Gilgam.es's platform, won from other players through playing matches and joining tournaments, and in the following phase via other ways as well, such as betting or selling inventory elements. It will

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[5]   http://store.steampowered.com/stats/

[6]   Daily volume = Players * 4 * 24 * 0.01 * $5 * 0.1 The length of a round is 15 minutes; 4 games can be played within an hour. The share of Gilgam.es is 10%, the average buy-in is $5.

be the only currency gamers can use on the platform. Users can acquire GGS during the crowdsale by sending Ether ("ETH") to the GGS contract on the blockchain.

Token crowdsale

The Gilgam.es Token initial coin offering will be held in the form of a crowdsale. Potential users and investors will be able to buy GGS by means of sending Ether from a decentralized wallet into the smart contract, available on our ICO website. The sale will last four weeks from 12:00 Central European Summer Time **20/06/2017** to 12:00 CEST **20/07/2017,** preceded by a pre-sale from 13/06/2017, offering an even larger discount. The above times are approximate, since they are measured by the Ethereum Block period that most closely corresponds with them.
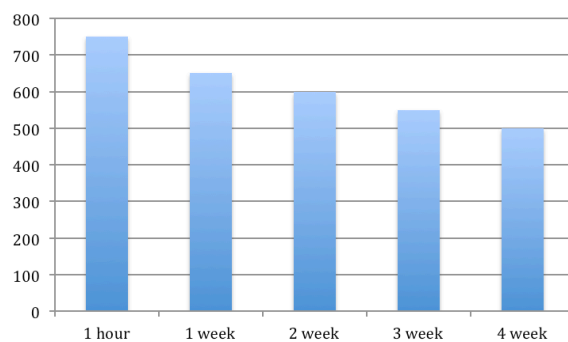
The Power Hour, that is, the first hour of the crowdsale will see huge discounts, since **750 GGS** can be bought for **1 ETH**. Then the rate for the first week will be **650 GGS/1 ETH;** with the rate decreasing proportionately every week, with **600 GGS/ETH** on the second week; **550 GGS/ETH** on the third one, and finally **500 GGS**/ETH during the last week.

The crowdsale will have a hard cap of 120 million GGS embedded in the smart contract that automatically disables additional sales.

Token transfer will be restricted for two months after the crowdsale. Additional funds include a 20M GGS founders' pool with a 24-month holding period plus a 1-year vesting cliff (36 months in total). 10 million tokens will be allocated for ecosystem funds, for promotion and tournaments. Most of the funds, 50%, is intended for tech development; 20% for sales and marketing; 15% for general and administrative purposes; 5% for legal expenses, and 10% for miscellaneous

expenses and reserves.

Player management

Upon registration, each player is to meet KYC requirements. Connecting the steam account with KYC options ensures that each player can register only with one account. Banning cheaters is final; they cannot register again to the system.

Match results

Match results are determined in 2 steps.

Match results will be checked and supervised by our own AI. Continuously learning, it screens cheaters and immediately bans them. Participants may accept the screened results or can veto them. Verification of vetoes will happen within 48 hours. Final decisions will be made by experts within our internal monitoring system.

Screening cheaters

The first line of defense against cheaters and cheating software is the anti cheat system embedded in our client software. It monitors the extensions loaded into the memory of running games and in case it detects any suspicious software, it will request its user to remove it. The second defense line is our AI continuously monitoring the processes and results of running matches. It will learn player behavior patterns on the basis of pre-defined boundary conditions, tuned on salient behavioral anomalies. The third line of defense is made up of the internal experts of the system who are able to draw final consequences on the potential manipulation of the game, based on the recorded stream image and statistics of the game. The fourth defense line is provided by connecting the Steam account with KYC functions.

Vetoing

Should a participant not accept the end results of a game, they can veto it. Of

course, its fee must be paid in order to eliminate the possibility of filibusters. Upon vetoing, our experts will examine the issue and decide on the official results. If the veto proves to be justified, the veto fee will be returned for the vetoing user together with the buy-in of the cheater, while all the other participants in the game will get back their own buy-ins.

KYC

We wish to utilize Know Your Customer principles as the 4th defense line for eliminating cheating. Users only can join the games if they meet all the KYC requirements. Cheaters will not be able to register new accounts in our system. Banning is final and not resolvable.

Private tournaments

We will provide and opportunity for organizing one's own tournaments, for which our tools will ensure security, and the game organizers will provide players. Private tournaments may be accessed via invitation or publicly as well.

Betting (Later)

As the first step of expansion, based on the statistics of the users of the platform, we are planning to embed a betting module, which would expand the functions of the platform.

Coinflip, jackpot (Inventory elements) (CS:GO, etc…)

The platform can be used for launching coinflip and jackpot games with inventory elements.

Sell-Buy inventory elements

We will provide an opportunity for utilizing tokens, swapping, buying and selling inventory elements. (CS:GO, etc...)

Referral rewards

Users can acquire tokens by recruiting new users as well. The recruiters will get their referral rewards after the first game of the newly registered person invited by them.

Ranking

We will develop our own ranking system for the users of the platform. Ranks can be attained depending on the user levels of the platform. Ranks entail various levels of entitlement and rewards.

MatchMaking Ranking

A player's Matchmaking Ranking ("MMR") will be refreshed after every match they play. It will be adjusted depending on the actual MMRs of the player and the player's opponent. The ranking gained or lost by each player in a match will be the opposite of the gain or loss of their opponent.

Platform

The platform will be developed divided into several regions in order to keep pings low and distribute network load. The regions are planned to be the following:

- Asia
- Australia
- Europe
- North America
- South America

The client application, which can be downloaded from our landing page, will run within an electron framework on JavaScript, HTML, CSS basis platform will not depend on the operating system of the user. The first anti-cheat defense line is embedded in the the client application. It monitors the programs used by the user and their interference with the running game program. The interface will allow the user to create an account by founding a new Ethereum address with Ether via an established payment processor.

Regional API servers will ensure connection between users, supervise the adding of rooms, and monitor the statistics of currently running games. The AI coded by us will learn players' behavioral patterns and interfere in case it detects salient anomalies in the players' behavior.

Regional RoomSync API servers will monitor pending and running rooms.

SECURITY

Apart from the above mentioned solutions, Gilgam.es will subject its platform to a security audit before launch in order to keep users' funds safe in the smart contracts.

Timeline

May, 2017: White Paper & Crowdsale Announcement

Jun, 2017: Crowdsale starts

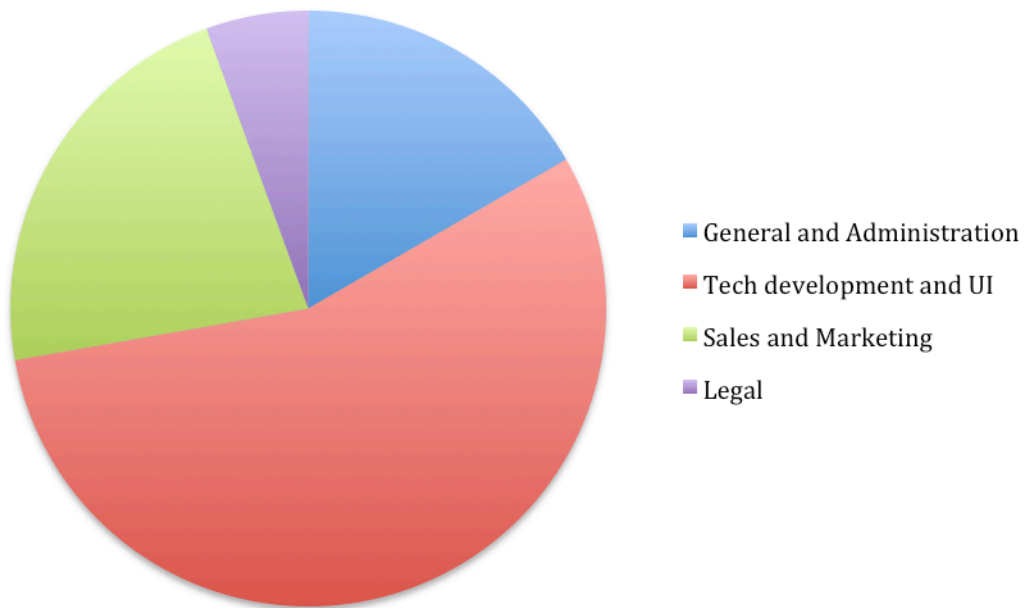Aug, 2017: Crowdsale ends

Okt, 2017: Private Alpha version

Dec, 2017: Private Beta version

Jan, 2018: Public Beta version

Mar, 2018: Production version starts

Funding

General and Administrative	15%
Tech development and UI	50%
Sales and Marketing	20%
Legal	5%
Misc & Reserves	10%

- General and Administration
- Tech development and UI
- Sales and Marketing
- Legal

Team

CEO Zsolt Rétháti:

Graduated from King Sigismund University in economics and Human Resources; possesses all qualities of a professional leader. CEO of Gilgam.es Ltd.; has organized and set up several successful businesses.

Development team:
Ákos Gilikter:

Blockchain and mining expert. Owner of an 1600 pcs mining farm. Graduated from ELTE as a programming mathematician, applied mathematics expert. Node.js expert.

Blázsev Drazsen:

Graduated from UP in programming specialist, computer science engineer. Node.js expert. Full time developer in Node.js from 2014.

István Zoltai:

Virtual environment and AWS expert. Certified AWS engineer.

Viktor Hudi:

Champion of Hungary 2012 in CS 1.6, e-sport specialist and advisor.

Bálint Fehér:

E-sport specialist, server architecture expert, map maker.

PR Team:
Berta Bakonyi:

Graduated from PTE in English and linguistics. Extensive experience in marketing, customer support and PR. Co-ordinator of PR and customer support team.

Balázs Kozma:

Sales executive of Gilgam.es Ltd., and online marketing expert.

Zheng Wei:

Public relation expert and Marketing manager of Gilgam.es Ltd.

Disclaimer

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Gilgam.es Token, or "GGS", is a cryptographic token used by the Gilgam.es network.

GGS is not a cryptocurrency.
At the time of this writing, GGS (i) cannot be exchanged for goods or services, (ii) has no known uses outside the Gilgam.es network, and (iii) cannot be traded on any known exchanges.

GGS is not an investment.

There is no guarantee that the GGS you purchase will increase in value. It may – and probably will at some point – decrease in value. Those who do not actually use their GGS honestly and fairly will lose their GGS to those who do.

GGS is not evidence of ownership or right to control.

Controlling GGS does not grant its controller ownership or equity in Gilgam.es, or the Gilgam.es network. GGS does not grant any right to participate in the control the direction or decision making of Gilgam.es or the Gilgam.es Network.

1) Risk of Losing Access to GGS Due to Loss of Credentials

The purchaser's GGS may be associated with an Gilgam.es account until they are distributed to the purchaser. The Gilgam.es account can only be accessed with login credentials selected by the purchaser. The loss of these credentials will result in the loss of GGS. Best practices dictate that

purchasers safely store credentials in one or more backup locations geographically separated from the working location.

2) Risks Associated with the Ethereum Protocol

GGS and the Gilgam.es network are based upon the Ethereum protocol. As such, any malfunction, unintended function or unexpected functioning of the Ethereum protocol may cause the Gilgam.es network or GGS to malfunction or function in an unexpected or unintended manner. Ether, the native unit of account of the Ethereum Protocol may itself lose value in ways similar to GGS, and also other ways. More information about the Ethereum protocol is available at http://www.ethereum.org.

3) Risks Associated with Purchaser Credentials

Any third party that gains access to the purchaser's login credentials or private keys may be able to dispose of the purchaser's GGS. To minimize this risk, the purchaser should guard against unauthorized access to their electronic devices.

4) Risk of Unfavorable Regulatory Action in One or More Jurisdictions

Blockchain technologies have been the subject of scrutiny by various regulatory bodies around the world. The functioning of the Gilgam.es network and GGS could be impacted by one or more regulatory inquiries or actions, including but not limited to restrictions on the use or possession of digital tokens like GGS, which could impede or limit the development of the Gilgam.es network.

5) Risk of Alternative, Unofficial Gilgam.es Networks

Following the presale and the development of the initial version of the GGS platform, it is possible that alternative networks could be established, which utilize the same open source code and open source protocol underlying the Gilgam.es network. The official Gilgam.es network may compete with these alternative, unofficial GGSbased networks, which could potentially negatively impact the Gilgam.es network and GGS.

6) Risk of Insufficient Interest in the Gilgam.es Network or Distributed Applications

It is possible that the Gilgam.es network will not be used by a large number of businesses, individuals, and other organizations and that there will be limited public interest in the creation and development of distributed applications. Such a lack of interest could impact the development of the Gilgam.es network and therefore the potential uses or value of GGS.

7) Risk that the Gilgam.es Network, As Developed, Will Not Meet the Expectations of Purchaser

The Gilgam.es network is presently under development and may undergo significant changes before release. Any expectations regarding the form and functionality of GGS or the Gilgam.es network held by the purchaser may not be met upon release, for any number of reasons including a change in the design and implementation plans and execution of the Gilgam.es network.

8) Risk of Theft and Hacking

Hackers or other groups or organizations may attempt to interfere with the Gilgam.es network or the availability of GGS in any number of ways, including without limitation denial of service attacks, Sybil attacks, spoofing, smurfing, malware attacks, or consensusbased attacks.

9) Risk of Security Weaknesses in the GGS network Core Infrastructure Software

The core software of Gilgam.es network is based on opensource software. There is a risk that the Gilgam.es team, or other third parties may intentionally or unintentionally introduce weaknesses or bugs into the core infrastructural elements of the Gilgam.es network interfering with the use of or causing the loss of GGS.

10) Risk of Weaknesses or Exploitable Breakthroughs in the Field of Cryptography

Advances in cryptography, or technical advances such as the development of quantum computers, could present risks to cryptocurrencies and the Gilgam.es platform, which could result in the theft or loss of GGS.

11) Risk of GGS Mining Attacks

As with other decentralized cryptographic tokens and cryptocurrencies, the blockchain used for the Gilgam.es network is susceptible to mining attacks, including but not limited to doublespend attacks, majority mining power attacks, "selfishmining" attacks, and race condition attacks. Any successful attacks present a risk to the Gilgam.es network, expected proper execution and sequencing of Gilgam.es markets, and expected proper execution and sequencing of Ethereum contract computations. Despite the efforts of the Gilgam.es Team, the risk of known or novel mining attacks exists.

12) Risk of Lack of Adoption or Use of the Gilgam.es Network

While GGS should not be viewed as an investment, it may have value over time. That value may be limited if the Gilgam.es network lacks use and adoption. If this becomes the case, there may be few or no markets upon the launch of the platform, limiting the value of GGS.

13) Risk of an Illiquid Market for GGS

There are currently no exchanges upon which GGS might trade. If ever exchanges do develop, they will likely be relatively new and subject to poorlyunderstood regulatory oversight. They may therefore be more exposed to fraud and failure than established, regulated exchanges for other products. To the extent that the exchanges representing a substantial portion of the volume in GGS trading are involved in fraud or experience security failures or other operational issues, such exchanges' failures may result in a reduction in the value or liquidity of GGS.

14) Risk of Uninsured Losses

Unlike bank accounts or accounts at some other financial institutions, funds held using the Gilgam.es or Ethereum network are generally uninsured. In the event of loss or loss of value, there is no public insurer or private insurer, to offer recourse to the purchaser.

15) Risk of Dissolution of the Gilgam.es Project

It is possible that, due to any number of reasons, including without limitation an unfavorable fluctuation in the value of Bitcoin, unfavorable fluctuation in the value of GGS, the failure of business relationships, or competing intellectual property claims, the Gilgam.es project may no longer be a viable business and may dissolve or fail to launch.

16) Risk of Malfunction in the Gilgam.es Network

It is possible that the Gilgam.es network malfunctions in an unfavorable way, including but not limited to one that results in the loss of GGS, or information concerning a market.

17) Unanticipated Risks

Cryptocurrency and cryptographic tokens are a new and untested technology. In addition to the risks set forth here, there are risks that the Gilgam.es team cannot anticipate. Risks may further materialize as unanticipated combinations or variations of the risks set forth here.