

Gron Digital Blockchain Gaming & Betting Platform White Paper

"The first generation of the digital revolution brought us the Internet of information. The second generation — powered by blockchain technology — is bringing us the Internet of value: a new platform to reshape the world of business and transform the old order of human affairs for the better." – *Don Tapscott*

1. Abstract

The global Gaming and Betting industry has been around for years and will be around for many more owing to the attractiveness and growing demand within the industry. Despite this, there are undeniably fundamental issues which the Gaming and Betting industry is confronted with. The Gron Digital platform, which will be discussed below, aims to promote innovation. Furthermore, the platform will provide assurance to all role players as transactions in the industry guarantee transparency and fairness through the cryptographically verified code, rather than human intervention.

This conceptual paper captures the Blockchain Protocol for fair gaming. The paper will establish how Gron Digital creates a platform that will realign the global Gaming and Betting market through reliable and autonomous transactions on the Blockchain. This platform will generate an economy among users, which is catered for everyone by allowing broad-based participation in the following roles:

- Game and Application Developers;
- Bankroll & Risk Backers;
- Service Providers;
- Operators;
- Gaming Laboratories and Certifying Authorities;
- Regulators; and
- Players.

2. Introduction

The size of the regulated global online Gaming and Betting market in 2016 was \$45.86 billion, while forecasts indicate an increase of up to \$56.05 billion by 2018. There is no solid data regarding the size of the illegal market, however it is estimated at around \$200 - \$400 billion annually. One can argue that this lucrative industry is often associated with negative connotations. However, the questions remains – can these perceptions be changed? Gron Digital proposes a Gaming and Betting economy built on the Blockchain that is run by Smart Contracts. A Smart Contract is a self-executing contract, whereby the agreed terms of the contract between the parties are directly written into lines of code. This platform will bring the inherent benefits of trust, transparency and certainty to our economy presenting players with an open and fair alternative to the norm.

This paper will explore the proposed platform from a number of perspectives. Namely: regulation; barriers to entry; manufacturing and cost of certifying Gaming and Betting products and systems; operators and the players

themselves. Thereafter, the paper will explore the features of our system, which include: Random Number Generation (RNG); auditable Return to Player percentages (RTP); our development tool for games; application development, as well as how regulators and operators fit into the platform, which allows them to optimize their current or new businesses. The Gron Protocol uses a utility crypto-token called GRO. GROs are used as a currency for transacting and as an incentive, as well as a reward mechanism for various platform users.

3. Common Industry Problems

There are many factors that affect the Gaming and Betting industry negatively. At the forefront, it is the issue of trust. Without trust people are hesitant to transact. Trust affects all aspects of the industry from fair games, to reputable operators, to the systems that hold customers' deposits and manage their winnings. Current mechanisms are based on a model of human intervention and control, which provoke fraud and dishonesty. Players therefore are confronted with challenges that lead to distrust. The common industry problems will be discussed below.

3.1 Deposits and Withdrawals

When players make deposits into a gaming account, which is controlled by a third party, there are often delays that come with this. The deposits often take long to reflect or sometimes fail to reflect at all. How does the player know their money is safe? Withdrawals are an additional issue which players are confronted with. Often, withdrawals are only allowed above a certain minimum threshold amount and can further incur fees. Turnover clauses for bonuses and promotions, Gaming and Betting Tax, as well as reliance on third party systems for transacting on these networks all present areas where trust and efficiency are essential for a commercial relationship to exist.

3.2 Fair Competition

A monopoly is characterized by the absence of competition. This means that monopolies can initiate high costs for consumers, inferior products, and often corrupt behavior, which forces individuals to develop a degree of distrust. The effect is that monopolies gain greater control within the Gaming and Betting sphere, this means that monopolies may impede new entrants into the industry, by discriminating and inhibiting experimentation or new product development. Furthermore, financial barriers, which include the cost of entry for new operators and the costs associated with compliance, are more accessible by monopolistic giants.

3.3 Trusted Service Providers

An issue which is yet to be addressed is the issue of licensing. Players who visit and sign up with various service providers, may not always be able to differentiate between legal and illegal operators. This leaves players confused and deceived.

3.4 Fair Gaming

Are the offered products fair? Will one be treated ethically and professionally? From a development and software providers perspective, Gaming and Betting products have not evolved significantly. Apart from the cost of development, companies must ensure that Gaming Laboratories certify their gaming products in order to conform with fair gaming practice before they enter the market. These laboratories work within a strict framework that may hinder the creativity of game developers. Additionally, the code and logic of these systems involve the intellectual property of the developer or system providers, which is often a close-guarded secret. This forces players to trust the developers, their games and systems, alongside the Gaming Laboratory, which certifies the products for fairness. Game logic is programmed into a machine or a table game (physical or online) and is the intellectual property of the gaming manufacturer - who is unlikely to share it with the public.

3.5 Random Number Generator and Return To Player Percentage

Another issue commonly discussed is the issue of Random Number Generator (RNG). A simple example of

RNG is lotteries. Lottery participants are forced to trust that the software code or physical device generating the winning numbers is truly random. Without such a system there will be an element of predictability when players place their bets. Contrary to common belief, the Gaming and Betting industry do in fact want their RNG to be as random and unpredictable as possible. This is to ensure that no player can guess the outcome of the next slot reel stop nor the winning numbers of an upcoming lottery draw. However, the actual problem in the world of Gaming and Betting is rooted deeper than the question of RNG. How do the players know the game is fair? The concern is that the game's logic and Return To Player (RTP) percentage are taken for granted by players.

3.6 Pari-mutuel Betting (Pool Betting)

The issue of Pari-mutuel betting differs from fixed-odds betting in that the final payout is only determined once the pool is closed, whereas in fixed-odds betting, the payout is agreed on once the bet is placed. Thus, it is clear that the Pari-mutuel betting system raises the concern of transparency. Essentially, this may diminish trust among players as payoff odds are calculated by sharing the pool among all winning bets, this means that players ought to place their fate and trust in a third party to calculate the shares honestly and fairly.

At present, individuals and technology in the industry, have lacked the ability to solve the abovementioned problems, particularly the issue of trust and cost. Thus, parties in the industry rely on authoritative bodies and regulation to instill the trust, while costs incurred remain high for all parties. In order to overcome these concerns, Gron Digital offers a platform which caters for and brings together all role players in the industry, who can harmoniously co-exist and share the revenues. This will offer an eco-system that is transparent and trustworthy, as it allows people to partake in Gaming and Betting activities, administered by cryptographically verifiable code.

4. Platform

The development of the Gron Digital platform aims to create an eco-system where transactions are administered by cryptographically verifiable code without human intervention. This creates a Gambling and Betting domain for all participants that is:

- Secure;
- Transparent;
- Guaranteed;
- Autonomous;
- Auditable; and
- Fair

The foundation of the Gron Protocol is that the platform represents a set of Smart Contracts that act as the autonomous trust agent, which subsequently governs all transactions. These Smart Contracts are able to automatically fulfill a set of predetermined conditions based on coded rules that are executed on the Blockchain. Through the use of cryptography we can provide security, transparency and a verifiable log of all transactions.

Gron Digital will provide a set of pre-built modules that will cover all aspects of Gaming and Betting operations. Using our tools and framework, developers and companies will be able to assemble a selection of pre-built modules and build their own custom applications. Additionally, Gron Digital will encompass a provision for external development of modules by the community.

It is also important that all role players receive some economic incentive for their participation on our platform. To enable this, all transactions are based on our utility token called GRO. All bets are placed in GRO, all winnings are paid out in GRO as well as any kind of development, bonus, incentive and fee rewards are paid in GRO. Broad-based participation is crucial to the success of any economy. Several participants have been identified by the Gron Digital team in the creation of our eco-system. In the post MVP (Minimum Viable Product) stages we may find the need to include additional roles. However, set out below are the minimum participants which we have thus far identified in order for our eco-system to function.

4.1 Protocol Development

Gron Digital will be responsible for the development and implementation of the Blockchain Protocol for fair gaming and Smart Contracts. This Protocol will benefit from the combined knowledge of our founders' experience as well as the existing systems they bring to the platform.

Along with the protocol, Gron Digital will develop tools and a framework allowing easy application development. This constructor will have modules spanning across all the services and processes which are required to run a Gaming and Betting operation. Gron Digital will also provide a pool of casino, sports and lottery modules to kick-start the creation of custom applications.

4.2 Games and Distributed Application (Dapp) Developers

Development, in a broad sense, includes Gron Digital or any third party contributor who develops a functional game or service available to our platform. This could be anything from a unique casino game to a pool betting management service. It could also include outsourced development of custom applications for operators who prefer professionals to build their systems for them.

4.3 Service Providers

The industry relies on several services in order to operate efficiently, these include the providers of:

- Fixtures and Events;
- Odds;
- Casino Games;
- Lotteries;
- Results;
- Statistics;
- RNG; and
- Line-makers

Individuals and companies alike will be able to provide these services and earn a fee for their input.

4.4 Operators

Operators can be individuals or existing companies, operating within the ambit of law within their jurisdiction, who intend to move to the Blockchain or become a start-up by initiating an operation on the Blockchain.

Existing operators who are looking to move to the Blockchain for the inherent benefits will still have regulations to comply with. Our Smart Contract will accommodate various compliance criteria such as: license verification; Tax compliance; KYC and dispute resolution. Operators will be able to use our tools to assemble modules that will suit their needs. This will allow them to operate effectively on the Platform.

Start-ups will also have the ability to integrate modules, build their own applications and operate them on the Blockchain. This opens up the industry to fair competition, fostering higher standards and greater variety for the players.

4.5 Scouts & Resulters

Scouts are reward seekers. These are individuals who attend live events and provide the latest information in real time to the network. Gron Digital will provide a mobile application with the functionality needed to perform these tasks. There can be many Scouts at one event, who all proceed to report to the network. This accumulation of real time data gives us greater consensus and information accuracy.

Results are a critical part of the platform, they need to be from a reliable source, highly accurate, verifiable and received quickly. Scouts and Resulters are rewarded with GRO in a tiered structure, based on the accuracy and speed with which they provide event updates.

4.6 Affiliates and Referrers

Driving the quality-traffic to a Gaming and Betting website is key for a successful online operation. Well-structured affiliate programs can assist operators in achieving their sales goals. As seen within the common industry practice of the once-off introduction fee, Gron Digital aims to deviate from this conventional system, by introducing a fair, lifelong reward mechanism to the Referrers. The said mechanism will ensure the continuity throughout the Life-Time Value of the Players referred.

4.7 Bankroll and Risk Backers

Bankroll and Risk Backers can be an individual or an entity acting in different roles or different parties combining resources into one Smart Contract. Their typical role is to provide the initial bounty used to subsidize games by coupling their utility tokens to a contract for a reward. They can back jackpot prizes or bonus offers on a big sporting event, lotteries and other various games. They are willing to expose themselves to high risk for a reward.

4.8 Players

Players are individuals that discover Gaming and Betting offerings on the Gron Digital Platform and partake in gambling activities by using GRO utility tokens. Players can also earn rewards for referrals, through first play promotional adoption of a newly developed game, as well as through various incentive and bonus schemes that will be provided by operators. At Gron Digital we believe that other customers will add value as the ecosystem develops and as various needs arise.

4.9 Regulators

The aim of a regulated Gaming and Betting industry is to ensure that all role players involved in any gambling activities are brought within the boarder of the regulatory legal framework. Effective regulations ensure that the industry upholds national and internationally recognized standards of compliance within the economic sector. Essentially, the purpose of legislation is to protect role players and ensure operators are fair. The manifestation of such an industry as an online forum, as well as the increase of people's reliance on technology, may present real concerns as cyber-crimes escalate. The regulatory legal framework becomes stagnant and lags as it may struggle to keep up with the continuous advancement of technology. These negative experiences leave the regulatory framework static and the players vulnerable, damaging the reputation of the Gaming and Betting industry as a whole. Regulatory bodies will benefit from participating in the Gron Digital Platform. Existing regulated businesses may look to move to the Blockchain for the security and synergy it provides to the industry. This includes:

- Tax collection efforts (which accounts for the majority of their revenue and coincidentally is the area where most fraudulent activity can occur). Tax can be programmed into our Smart Contract and paid directly to them without the need for manual intervention, costly audits and oversight procedures;
- All significant transactions will be recorded in the unchangeable online ledger offering guaranteed auditability and transparency;
- Digital signatures added to Smart Contracts by regulators can verify operators and their licenses in operators' applications for added assurance and security for players alongside regulators alike; and
- Smart Contracts can also have built-in dispute resolution terms, which reduce the need for regulatory intervention when solving disputes.

5. Gron Digital Economics

GRO is our utility token that will be used on the Gron Digital Platform. The utility token acts as:

- a Gaming and Betting currency;
- as a reward;
- a form of payment; and
- an incentive which powers the Gron Digital economy.

The Platform can be utilized in several ways, namely when making transactions and when providing services. At the

forefront, GRO will be used as a currency. Perhaps one can think of the GRO as a casino chip. GRO utility tokens will enable individuals and organizations to play any game/s available on the Platform, to place bets with a sportsbook or play the lottery. All potential winnings will be paid out in GRO, however this is not limited to the GRO acting as a mere currency. Depending on the adopted role in the eco-system, participants will earn GRO and be rewarded for the services they provide on the Platform. The key role-players on the Platform include:

- Game and Application Developers;
- RNG;
- Service Providers;
- Resulters;
- Line-makers;
- Bankroll & Risk Backers;
- Scouts; and
- Statistics Providers.

The value model is based on the fee earned for services provided. Fees can be fixed or incentivized in proportion to the risk taken or complexity of the task they perform. Gron Digital will earn a general fee to support continuous improvements to the protocol, development of modules and tools for application development, as well as to fund operations and marketing. Once our crowdfunding initiative succeeds and the utility tokens are issued, GRO will be listed and traded on major exchanges.

6. GRO Token Economics

The funds to be raised in the coin offering represent the Founders' best estimate of the maximum capital required to develop the gaming platform and roll it out to the existing betting industry in a sustainable way. This pool of available funds has been derived from the average historical price of Ethereum to ensure that sufficient funds are available to complete the project, but those late ICO entrants are not unduly diluted assuming ETH appreciative environment.

In order to demonstrate that this Use of Funds will result in significant value accretion within a reasonable timeframe, the forecasted ICO issue price was compared to the discounted future value per circulating token of the estimated utility value of the underlying ecosystem, which is a proxy for the size of the asset base or alternatively GRO's share of the Total Addressable Market. Given assumptions made in relation to the compound annual growth of online betting, Gron Digital's penetration of this market and the saturation over time (which produces a conservative adoption profile), it can be shown that the present value of a GRO in ten years' time, will be multiples (hundreds) of the initial offer price. This is true even if the GRO is assumed to remain sovereign bound initially and only expand to capture the global market after a period in excess of 10 years. In addition, the rate used to discount the future value reflects the deep risk-adjusted nature of the current cryptocurrency market which is assumed to be considerably more than a typical technology reliant VC start-up.

The above valuation methodology reflects the fact that, in its purest form, GRO will be a utility token as it will facilitate participation in the online gambling industry. However, GRO will also generate value in the form of fees from its functionality as a technology platform as well as its ability to reward and incentivize industry stakeholders. These parallel value streams will contribute the overall future benefit of the token in the form of stored value appreciation.

Quite apart from the quantitative characteristics of value mentioned above, from a qualitative perspective, intrinsic value can be shown particularly in relation to:

- the sheer size and growth potential of the online betting industry;
- the composition of the Gron Digital team and their advisers;
- the maturity of the existing group assets; and
- the 'value add' that the distributed Ethereum blockchain will necessarily bring to the mistrusted gambling industry.

7. Competitive Analysis

The Blockchain domain has become increasingly relevant since the launch of Bitcoin and other cryptocurrencies. The growing demand for the Blockchain adoption continues and will continue as new ideas enter the market daily. The Blockchain has the potential to benefit multiple industries. This is particularly evident in the clear synergy between the Blockchain and the Gambling industry.

Gron Digital has several key advantages over its competitors. The founders of Gron Digital possess the relevant expertise in the industry:

- We are a legal Licensed Manufacturer and Service Provider to the Gaming Industry;
- We have the knowledge and hands-on experience in the Gaming and Betting domain;
- We have the IT infrastructure, necessary expertise, the management and the development team required to execute a project of this nature efficiently; and
- We have the Gambling and Betting certified products used in a production environment.

Gron Digital is not in the learning phase. We exhibit real-world experience, as well as existing functional systems and infrastructure which are currently servicing customers and the gaming industry. Explore the following listed sites to see the foundation from which Gron Digital will be launched off: www.cdpgaming.com www.yesplay.bet www.sintez.com

Our accelerated development timeline means our MVP blueprint for the incorporation of our current systems with the Blockchain is already underway.

8. ICO

The Gron Digital Platform will be based on its GRO utility token. The GRO token is issued on demand as contribution takes place, i.e. as 0,6 GRO is swapped for either ETH, BTC or BCH, an additional 0.4 GRO is issued and allocated to Founders, Team Incentives, and Initial Bank Roll fund, thus a total of 1 GRO is issued. The maximum of 950 000 000 (Nine Hundred and Fifty million) GRO utility tokens will be issued in the Pre-ICO and ICO phases, starting on the 09/01/2018 at time 00:00 UTC. The following cryptocurrencies can be swapped for GRO:

- Bitcoin
- Ethereum
- Bitcoin Cash

60% of the issued GRO, maximum 570 000 000 (Five Hundred and Seventy million tokens), will be allocated to the Gron Digital Pre-ICO and ICO phases for public participation. Pre-ICO is scheduled to run for 49 days, followed by 4 rounds of ICO with each round lasting for up to 14 days. These tokens are issued by GRO.sol contract. After all 4 rounds (or if the ICO ceiling of 570 000 000 tokens is reached) the ICO will close. Gron Digital aims to raise 57,000 ETH in the Pre-ICO and ICO phases, the breakdown of each round is as follows:

8.1 Pre-ICO:

14,000 GRO will be sold for 1 ETH, this includes the 40% bonus allocation to participants in this round. The round will run for forty-nine days or until the ceiling is reached.

8.2 First Round:

13,000 GRO will be sold for 1 ETH, this includes the 30% bonus allocation to participants in this round. The round will run for fourteen days or until the ceiling is reached.

8.3 Second Round:

12,000 GRO will be sold for 1 ETH, this includes the 20% bonus allocation to participants in this round. The round will run for fourteen days or until the ceiling is reached.

8.4 Third Round:

11,000 GRO will be sold for 1 ETH, this includes the 10% bonus allocation to participants in this round. The round will run for fourteen days or until the ceiling is reached.

8.5 Fourth Round:

10,000 GRO will be sold for 1 ETH. This round will run for fourteen days or until the ceiling is reached.

Funds raised during Pre-ICO and ICO phases will be allocated as follows:

- 50% - Software Development;
- 5% - Legal Framework and Finance;
- 15% - Operations;
- 10% - Marketing;
- 15% - Advisors;
- 5% - Contingencies.

The remaining 40% of GRO, maximum 380 000 000 (Three Hundred and Eighty million tokens), will be handled by GROVesting.sol contract as follows:

- 40% - Bankroll (immediately available);
- 30% - Team Incentives & Bonuses (available after 26 weeks from the date the ICO ends);
- 15% - Founders (available after 52 weeks from the date the ICO ends);
- 15% - Founders (available after 104 weeks from the date the ICO ends).

9. Development Roadmap

9.1 2012

- Server Based Casino Games Platform was Launched in the South American land-based market. 158 Video Slots and 12 Table Games

9.2 2014

- Gambling Manufacturer's License was issued by Western Cape Gambling and Racing Board
- Sports Betting License was issued by Western Cape Gambling and Racing Board
- Betfinity Wagering Record System was certified by BMM Gaming Testlab
- The Letter of Compliance was issued by the SA Gaming Authorities
- Betting and Lotto Platform was Launched

9.3 2016

- Blockchain and Smart Contracts were identified as most suitable and logical approach in Gambling and Betting
- R&D Blockchain application in gaming
- Sports Betting and Lotto prototypes were developed

9.4 2017

- Q2 – The decision to ICO was taken. Preparation for ICO
- Q3 – Consulting with advisors and legal team

9.5 2018

Q1

- pre-ICO starts 9 January 2018
- ICO starts 27 February 2018
- Development of Gron Digital Platform

Q2

- Implementation of existing Sports Betting Application on Gron Digital Platform, where GRO is the utility token
- MVP of mobile and desktop Sports Betting Applications
- Application for Regulators to access and audit all gaming transactions. Provide mechanism for issuing and verification of Licenses
- Listing GRO on Major Exchanges
- Results Providers Integration
- Referrals and Affiliates Program

Q3

- MVP of mobile and desktop Game of Skills
- MVP of mobile and desktop Lottery Application

Q4

- Desktop Casino Application. 20+ Video Slots, 4 Video Poker, Roulette, Black Jack, Texas Hold'em, Baccarat

10. Conclusion

Gron Digital has the knowledge, experience and capacity to make this Gaming and Betting Platform a reality. Gron Digital, together with other early adopters, seek to change radically the way in which people transact and exchange value for goods and services online. Considering recent history and the mismanagement of corporations and institutions that have plagued the functioning and trust of society, one can confirm that the development of this Platform is a step away from monopolistic and centralized structures. The Blockchain is the ideal solution to address the fundamental issues of trust and transparency. The future of online Gaming and Betting has never looked so extraordinary and exciting. Gron Digital creates a Platform which merges and connects various parties within this lucrative industry in order to ensure continuous growth and prosperity for all.

The value proposition, offered to the industry through our utility tokens and Protocol, provides the industry with an all-encompassing solution to various issues faced by operators, players, developers and regulators today. Through this detailed conceptual paper, we believe that our expertise and particular attention to the needs of the industry serve as powerful tools which enable us to bring this revolutionary Platform to the Gaming and Betting world.