

# WHITE PAPER



## *Gravel Production + Blockchain Option (GRV)*



***GLOBAL GRAVEL PRODUCTION***

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## DISCLAIMER

*This White Paper is constantly being updated (Version: 13-Jan-2017) and serves exclusively to inform about the Initial Coin Offering (ICO) of Gravel Coin, and it does not constitute itself as advertisement, recommendation, a financial advice, nor an offer or request for purchase or sale of a security or financial instruments.*

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GRV tokens represent a product (gravel), and do not constitute capital or equity in any entity, nor debentures, or bonds, thus they are not securities nor a financial instrument, thus they are and should be considered as utility tokens to be used as means of payment, also being subject to price increase. The GRV token is not prepared under compliance of the Securities Act, nor the securities laws of any State in the USA nor of any other country, also not under compliance of securities laws of the legal system, in which a potential token holder is domiciled.

## 1 ABSTRACT

GRAVEL COIN is a global project for the gravel production, comprising stone extraction, stone crushing and its commercialisation. It is designed to be our first coin in a cryptocurrency ecosystem for the mining industry. The project started with the Invitation Letter on behalf of Paulo Carneiro (GRV CEO) issued by the Government of Guinea (Conakry). He has a background in the mining sector, and he is the founder and partner of Craton-Roche Recursos Minerais, a Brazilian mining company with large experience in mineral prospecting, geological survey, mining and mineral processing. This plan aims the capital raising through the blockchain technology issuing the GRV COIN to invest in the gravel production globally. Currently, there are opportunities in Brazil, Guinea, and possibly in Bolivia. In Brazil the project has access to "shovel ready" stone sites. In Guinea, a new company will be registered, the government will grant a licence for stone extraction, and the stone extraction and a crushing plant will be set up. The business model seeks large scale projects with high demand for gravel.

## 2 INTRODUCTION

The two most relevant topics on the GRV ICO campaign are market and the Blockchain technology. The target markets are facing a shortage of the gravel output for home and commercial buildings, roads, bridges and railways to be built or renovated. The team has identified market opportunities in Brazil, Bolivia and in Guinea. In this country, the companies active are not able to meet the restrained demand, thus the country is facing some challenges to meet its needs. The Guinean market presents an average output of 150,000 tons per month, even though the actual production does not meet the demand, and besides there is an additional demand of gravel from neighbouring countries.

This undertaking in few months will serve as the foundation for the expansion of the project into the production of concrete and asphalt.

The sale of GRV Coin (GRAVEL Coin) will create an outstanding market for participants, who will benefit from the activities and a feasible expansion. After this project is consolidated, the organisation can easily increase its mineral portfolio by exploring other mining opportunities: precious metals, talc, niobium, Rare Earths Elements (REE), iron ore, zinc, copper and more, which some of them are already available.

In Guinea, the Ministry of Mines and Geology will make available some deposits for inspection and selection in the Dubreka area, just 30 km from the capital Conakry. In Brazil and Bolivia, the team have already identified stone sites close to major civil works to be realised. Among them we can point out the Porto Sul (port of Ilheus), the West-East railway (FIOL), the bridge Salvador-Itaparica Island, in the State of Bahia, while in the State of Minas Gerais the targets are the renovation of roads and the reconstruction of several facilities due to the accident occurred in the Samarco mine, town of Mariana. As a pattern, the team will choose a stone deposit according to its reserves and other features, which will be measured at the selected site after the site is inspected. Besides its mineral reserves, the geologist will select a deposit based on characteristics like logistics, geomorphology, distance to power and water, market, among others.

In South America, operations will be conducted by the company Craton-Roche (vetted by Connect Americas: <https://connectamericas.com/>), and in Guinea the project comprises the registration of a new Guinean mining company, selection of a granite deposit, purchase, import and setup of machinery and equipment, operational test, and start-up of full operation.

### 3 MARKET

#### Brazil

Initially, the target markets are the States of Bahia and Minas Gerais, where there is already availability of stone sites, and an existent continuous demand, as well large as scale projects described below. In Bahia, the stone sites available are located in three areas with continuous demand, each one at 60,000-80,000 tons per month.

#### Guinea

The gravel market in Guinea (Conakry) is growing, evidencing a present economic transformation in the country. The existent production nowadays is not capable to meet the demand. Gravel is a simple product used day-by-day in the construction sector, both residential and commercial. Even during hard times, this mineral product always has market, as it has application in all social levels. In the urban centres, even the most humble families the product is sought for the construction of floors, water reservoirs, septic tanks, beams, poles or pillars. That is why the consumption behaviour results in an ample consumer range and exhibits a stable behaviour.

Based on official information from the Ministry of International Cooperation, the demand is much higher than it is produced by the operating companies, including some from China and Italy, which production in the region of Lower Guinea (Conakry) is at 150,000 tons per month. Thus, considering a restrained demand, it is expected that the mine will be explored according to the proposal, start a saleable production from 30,000 tons/month and grows steadily.

In the future, according to the market, and with new investment, it is possible to increase the production to reach the amount of 75,000 tons/month. Within the urgent market need the project has very favourable conditions to be successfully launched in a short time.

## 4 PROBLEM

### **Brazil**

There is a continuous demand for the product, and a huge amount of gravel will be required for the projects listed in this document such as the construction of the bridge between Salvador and Itaparica Island, the FIOL railway, and the Porto Sul.

### **Guinea**

The country is facing a shortage in the output of gravel to meet the demand from the building sector, along with the need to construct or renovate roads and railways. At section 6 we present an extensive list of projects, our potential consumers. In the country, due to a great demand there is an immediate market share at 50,000 tons/month.

It is easily observable that there is a clear situation of the technological and financial capabilities limitation for an efficient execution of the planned public projects. The advanced degradation of transport infrastructure and energy production and the absence of massive investment in these areas for several years make insufficient the significant efforts since 2012. Not only the housing sector is facing difficulties, but also the transport sector in the Republic of Guinea, as it is mainly dominated by road transport with a significant milage needing resurfacing works. About 95% of the movement of people and goods are carried by road.

## 5 SOLUTION

According to the problems faced in the target countries, GRV becomes an integrated solution to cover the gravel supply chain. In Guinea, the government searched for an entity with expertise in the mining sector in order to set up the activities of stone extraction and stone crushing, aiming at the production of gravel to meet the current and future market demand. Thus, the government of Guinea issued the Invitation Letter on behalf of our company, which in turn structured the production on the mining plan at 30,000 tons/month. In short, our contribution will be the delivery of better transportation conditions, improvement of living standards, the generation of jobs, the environment protection through rational and technical mining methods, a stronger economy, among others.

## 6 OPPORTUNITY

The combination of a qualified team, mineral reserves, large demand, and investment creates an outstanding opportunity.

### **Brazil**

The construction of the bridge between Salvador and the Itaparica Island with approximately 12 km long.

The West-East Railroad Integration (FIOL) is designed to connect the N and NE regions of Brazil, from the State of Tocantins to Ilhéus (State of Bahia) in a 1,527 km extension. FIOL will be mainly used to transport grains and iron ore. This investment represents BRL1.92 billion (<http://www.projetocrescer.gov.br/ef-334>).

Porto Sul, also referred as Porto Sul Intermodal Logistic Complex or Porto Sul Port and Services Complex is a Brazilian port project to be constructed in the district of Aritaguá within the municipality of Ilhéus, State of Bahia. The project encompasses in its influence area an international airport, the Fiol railway (abovementioned), an industrial centre ([https://pt.wikipedia.org/wiki/Distrito\\_industrial](https://pt.wikipedia.org/wiki/Distrito_industrial)), an Exporting Processing Zone (EPZ), new roads and the gas pipeline Gasene ([https://pt.wikipedia.org/wiki/Gasoduto\\_da\\_Integra%C3%A7%C3%A3o\\_Sudeste-Nordeste](https://pt.wikipedia.org/wiki/Gasoduto_da_Integra%C3%A7%C3%A3o_Sudeste-Nordeste)).

The construction of the port will require R\$5.6 billion (US\$1.7 billion), from which R\$2 billion will be invested in the Terminal of Private Use (TPU) by Bamin - Bahia Mineração, Brazilian subsidiary of Eurasian Natural Resources Corporation (ENRC), a mining entity from Kazakhstan with main office in Luxembourg. The project anticipates the movement of 60 million tons of cargo in 10 years, reaching 100-120 million in 25 years. Porto Sul is the major port undertaking in the Northeast of Brazil with an area of influence covering the States of Bahia, Minas Gerais, Goiás, Tocantins and Mato Grosso ([https://pt.wikipedia.org/wiki/Porto\\_Sul](https://pt.wikipedia.org/wiki/Porto_Sul)).

For the stone site located in Itaberaba-Bahia, there will be the renovation of the federal road BR-242, with a continuous demand from several municipalities in a radius of 100 km.

In the State of Minas Gerais, major civil works are expected for the municipalities of Belo Horizonte (capital) and Mariana. In Belo Horizonte, the federal road BR-040 between Brasilia (capital of Brazil) and Juiz de Fora (route to Rio de Janeiro) will be renovated. In Mariana, due to the dam disruption at the Samarco mining company, several roads, buildings and streets will need to be renovated.

## Guinea

Railway:

- ❖ The country is preparing a series of works like the construction of the railway line Conakry-Kankan;
- ❖ The circulation of a second commuter train "Blue Train";
- ❖ A new railway, the Trans-Guinean: a multi-use multi-user railway line 650 km long linking south-east Guinea with the coast along the Southern Growth Corridor.

Roads:

- ❖ Arranging the highway from Conakry to km 36 into 2x2 lanes and from that point to be reconnected to the different national roads.
- ❖ Arranging the road Enta – Sonfonia into 2x1 lane for 2.6 km and the south cross section for 2 km.
- ❖ Asphalting different roads in some cities and towns which are: Faranah, Kissidougou, Dabola, Kouroussa, Siguiri, Mandiana, Kérouané and Dinguiraye for a total of 52 km of roads.
- ❖ The African Bank for Development is financing a project of road interconnectivity between Ivory Coast and Guinea. US\$50 million will be used to pave a section of Lola motorway. Lola is a town in Guinea situated in the border zone between Guinea and Ivory Coast. In addition the project will rehabilitate 300 km of roads between three countries of the Mano River Union.
- ❖ Louis Berger recently launched a project of supervision of construction work of €1.3 million (US\$1.4 million) for the repairing of a section of 151 kilometres of the National Road (RN1) connecting Dabola to Kouroussa in the center of Guinea.
- ❖ The construction of the national road RN2. Sogea-Satom realizes the rehabilitation of the RN2 a distance of 53 km between Kissidougou and Guéckédou, as well as the reconstruction of ten bridges. Worth €55 million, the project is funded by the European Union (10th EDF program).

- ❖ Rehabilitation of 194 kilometers between Kankan and Kissidougou road into a modern road meeting international standards. This road major project expected to open up areas of the Haute -Guinée, the Middle Guinea and facilitate access to maritime corridor.
- ❖ The construction of the railway line Conakry-Kankan, the second largest city in the country (662 km long) was entrusted to the French group Bolloré. Also announced that the construction of the railway line Conakry - Kagbélén, approximately 142 km long.
- ❖ Railway Kaloum-Kagbélén: Six wagons and 450 tons of rails are already in Conakry, on the side-lines of the inauguration of the Bluezone Kaloum, Bolloré wants to link the port of Conakry to the railway track. The Bolloré Group is managing Conakry container terminal is also he who is contractor of the construction project of the railway Kagbélén-Conakry, along about 42 km and Conakry-Kankan-Bobo-Dioulasso via Bamako.

Several projects have been completed in the area concerning the construction, reconstruction, rehabilitation and restoration of roads infrastructure as follows:

- ❖ 639 km of new road infrastructure construction;
- ❖ 240 km reconstruction of existing road infrastructure;
- ❖ 246 km rehabilitation of road infrastructure and 340 km of semi-rehabilitation of existing road infrastructure.
- ❖ The rehabilitation of the prefectoral road Yombiro-Dangaldou, Kissidougou prefecture of 47 km;
- ❖ Rehabilitation of community roads sections Mongo-Badala-Téméssadou in the prefecture of Gueckedou about 20 km;
- ❖ In terms of transport, in particular the rehabilitation of the airstrip and access road for 17 km N'Zérékoré airport;
- ❖ The development of a modern logistics platform Transport 100 ha Kouriah (Coyah).
- ❖ The opening up at least half of rural areas;
- ❖ Maintenance in good condition of at least 60% of the national road network by prioritizing the prefectures are not served by asphalt axes.

## **7 PRODUCTION: MINING PLAN**

This chapter addresses the aspects related to the mining methodology which will be adopted in the project. In all sites in Brazil and in Guinea, there are massive granitic outcrops, which normally present overburden in some spots.

In the State of Bahia in Brazil, the project has the availability of several sites. Stone site in the municipality of Santo Antonio de Jesus, distance to Salvador 210 km, federal and state roads, 49.78 hectares, with 100 municipalities in its surroundings. The site of Itaberaba, 300 km from Salvador, equipments are in place with 35,000 cubic metres of stone extracted. And a third site in Ilhéus, which will be appropriate for the supply to the large projects in that area.

State of Minas Gerais, the project has the availability of two sites. One site at 120 km from the capital, and a second one in the municipality of Mariana, both with great mineral reserves.



The mining plan is similar for each site, except for particularities like relief, among others. In general terms, the topsoil will be removed utilising a loader and/or excavator, which will be stockpiled in order to be later utilised for environmental recovery, and can be redistributed on the worked area according to the extraction advancement.

The quarrying method to be adopted for the stone extraction will be the open pit model, with an exploitation slot through descending benches, initiating by lowering the level, aiming at maximum exposure of the existent mineral potential preserving the stability of the excavated slopes.

Each opening will be monitored topographically and updated in the end of each month. The definition of the bench (height 12.0 metres and inclination of 15°) provides a geomechanical safety for such type of stone extraction, including signalling all area, the benches' sides, access ways, etc., and where there are potential risks, proper bulkheads.

The estimated waste/ore relation is 0.20/1.00 m<sup>3</sup> of extracted granite. The waste is composed by gravel and sandy soil, very little fertile. For an average soil thickness *in situ* of 0.4 metre, in an area of 30,000 sq.m. (3 hectares) to be effectively extracted, 12,000 m<sup>3</sup> of waste material will be moved. This material when stocked in an area of 50,000 sq.m. (5 hectares) will generate a 3.00 metre high pile, if totally utilised, what will hardly occur, as the environmental recovery will be conducted as the extraction will be advancing.

The operational sequence: topographical mapping with definition of drilling grid, drilling, primary blasting, secondary blasting, loading, transport and stone crushing.

Each hole will have 3 inches done by the pneumatic drill rig – Rockdrill connected to a 900 CFM compressor. The initial drilling distribution will be 1.50 x 3.50 m, which can be modified according to the results. The explosive to be used will be the emulsion type Powergel 800 as bedload and Powermix (NCN) as column load in the proportion of 40/60, respectively. Whenever possible the company will try to replace the use of explosives with an innovative eco-friendly solution.

The accessories will be detonating cord at 25 metre distant, and the fire will be started with trigger. Safety norms will be adopted using particle speed of 10mm/s, considering the Brazilian NBR 9653

established by ABNT (Brazilian Association of Technical Norms), which is capable to preserve the surrounding structures. The seismograph of the first detonations will be monitored, in order to study the rocky behaviour in the region adjusting the equation variables of Langford.

$$VP = K(D/Q^{1/2}) - B$$

VP = peak particle speed

D = distance of detonation to the point of measurement (m)

Q = maximum load by weight (kg)

K e B = constants to be determined in measurements and it is related to the rocky package x distance.

The detonations should be monitored, since the blast plan below was dimensioned considering previous experiences to such type of rock and the available equipment. The blast plan should be adapted according to the local structural geology (fracturing, faults, schistosity plan, etc), always being adapted taking the results into account:

A = 1.5 m (distance)

E = 3,5 m (spacing)

H = 12 m (bench height)

SF = 0.5 m (sub drilling)

T = 1.5 m (buffer)

$\theta = 15^\circ$  (inclination)

CF = 12.5 kg explosive emulsion by hole

(CF = bed load)

CC \* 18 kg granulated explosive by hole

(CC = column load)

Volume by hole = 63 m\*

RC = 484 g/m<sup>3</sup> (load ratio)

INÍCIO - Start

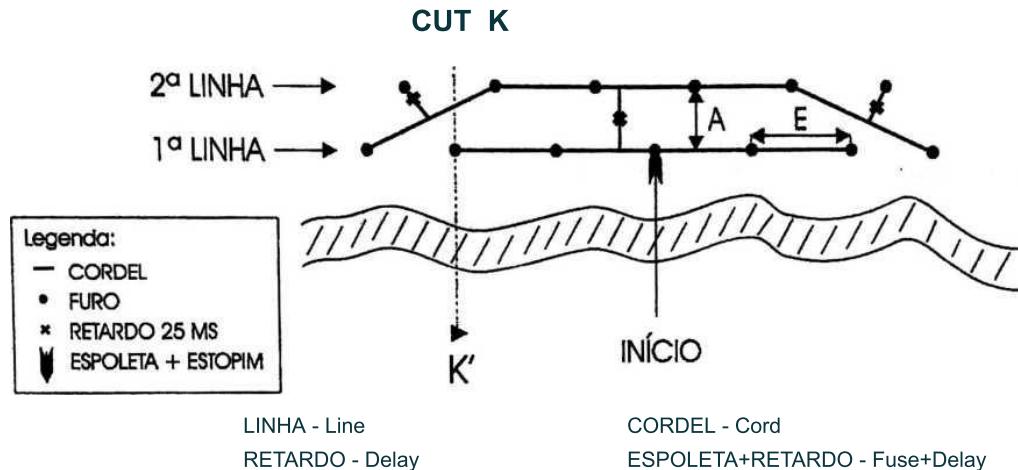
FURO - Hole

LINHA - Line

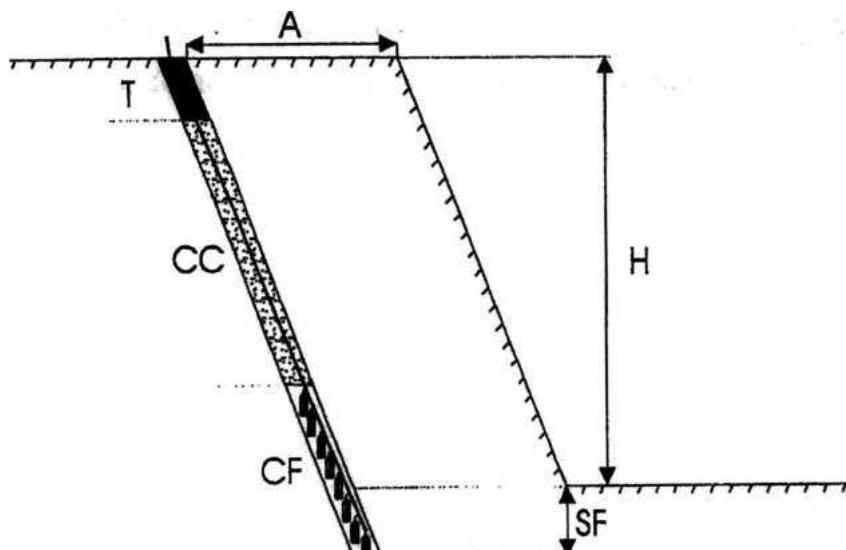
RETARDO - Delay

CORDEL - Cord

ESPOLETA+RETARDO - Fuse+Delay



CUT KK'

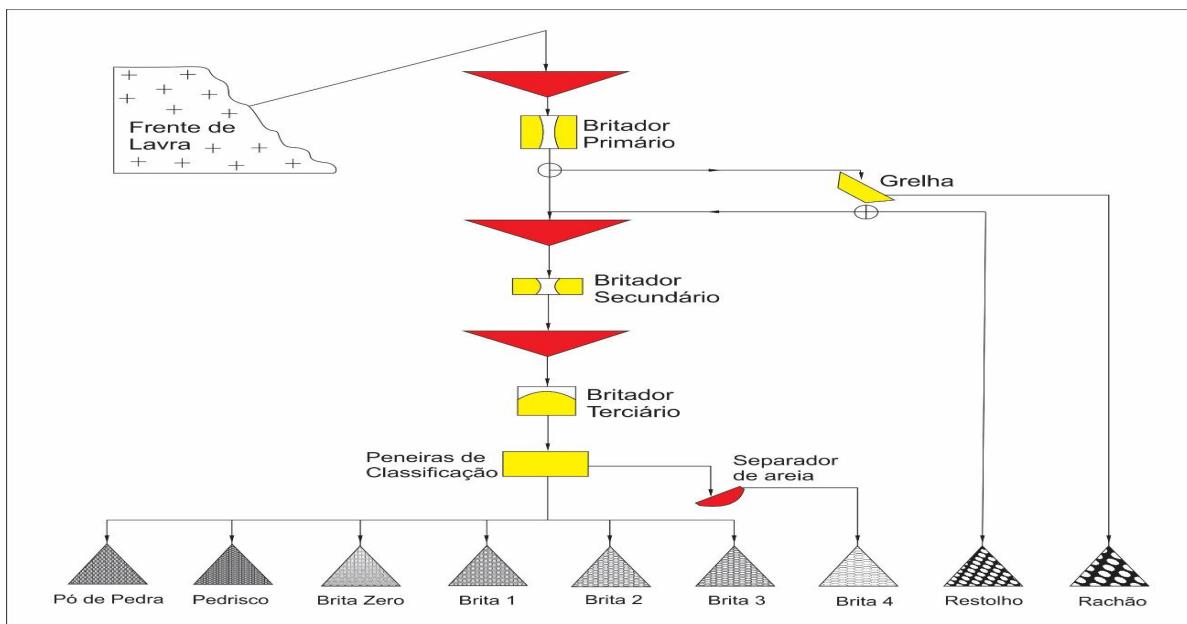


The secondary blasting will be carried out mechanically utilising the excavator and hydraulic breaker.

The loading of the removed material will be operated using a 194 hp loading shovel (possibly a FIAT FR-180). Internal transport will be realised by tipper dump trucks Mercedes Benz model MB 2318 with 12 m<sup>3</sup> capacity ore bucket, while external transport will be done by truck and eventually by train. Observation: all area will be signalised.

After blasting, the rock will be transported to the crushing centre, comprising a 40090 feeder, where the truck will dump the material. Following, the rock passes through the primary jaw crusher with 8060 size, afterwards to the stockpile. This material passes through a secondary crusher size 9025, where it is put on screening. The material will be selected below 38 mm, above this it will pass through the tertiary crusher 90 TS, returning to the screen ending the circuit. The screen will select gravel 0 and 1, and rock powder, according to the market expectation. This system is projected for a nominal capacity to produce 150 ton/h of crushed material.

### Crushing Plant Unity



**Frente de Lavra** - Mining Front

**Grelha** - Grid

**Britador Terciário** - Tertiary

**Separador de Areia** - Sand Separator

**Pedrisco** - Small Stone

**Brita 1** - Gravel 1

**Brita 3** - Gravel 3

**Restolho** - Stubble

**Britador Primário** - Primary Crusher

**Britador Secundário** - Secondary Crusher

**Peneiras de Classificação** - Classifying Screeners

**Pó de Pedra** - Rock Powder

**Brita 0** - Gravel 0

**Brita 2** - Gravel 2

**Brita 4** - Gravel 4

**Rachão** - Cracked Rock

The mining plan is essentially dynamic, as the mine is being explored. New information will be available, requiring a constant adaptation on the original plan according to the new conditions of the mine, demonstrated by its evolution.

## 8 ICO

The Gravel Coin project is set to be operated and managed by local companies such as Craton-Roche in Brazil and in other countries, while in Guinea, a new company will be formed. The organisational structure to be set up envisages the incorporation of a holding company domiciled in an appropriate ICO jurisdiction to manage the abovementioned operational organisations.

Gravel, a highly demanded product by the building industry worldwide, will be linked to GRAVEL COIN blockchain option, implemented and managed by the ETHEREUM platform. The GRV COIN will be pegged to 10 (ten) kilos of gravel and the offer will be divided in two stages: Pre-ICO and ICO.

The expected revenue is \$540,000/month or \$6,480,000/year (30,000 tons of gravel a month x \$18.00 average selling price in Brazil and Guinea). Within three years the volume of gravel to be produced will be 1.08 million tons corresponding to \$19.44 million, and within five years the quantity produced will be 1.8 million tons generating \$32.4 million.

The **Pre-ICO** will take place during the sale of four blocks of tokens with different discount rates. The blockchain option in the form of the GRAVEL COIN in the first block will be offered to participants for **\$0.05** with 10,000,000 tokens (GRV) emitted by the blockchain with a discount of 50% for \$500,000. The second, third and fourth blocks with 5,000,000 tokens each, respectively for **\$0.07**, **\$0.08**, and **\$0.09**.

The **ICO** has a minimum milestone setup is \$2.0 million (according to the activity as it is capital intensive), the total planned amount is **\$7,200,000**. At this stage, participants will have the opportunity to purchase a blockchain option of 55,000,000 tokens, being 1 GRAVEL COIN = **\$0.10**.

## 9 TOKEN FEATURES

- ❖ GRV will be pegged to 10 kg of gravel (ICO price \$10/t; market price \$18/t);
- ❖ GRV will be accepted as a mean of payment on PayMagnet app ([paymagnet.com](http://paymagnet.com));
- ❖ GRV will have the function as a mean of payment to purchase gravel, settle freight fees, pay of fuel, settle 3rd party merchant gravel sales commissions, and other transactions within the gravel market.
- ❖ GRV will be the core in the supply chain for the gravel market, which will boost the token price appreciation.

## 10 ROADMAP

January 2018 - Pre-ICO in 4 blocks with 10%, 5%, 5%, and 5% of the total token supply.

January 2018 - ICO.

January 2018 - register a new company in Conakry, selection of the stone site to startup, prepare reports and assessments.

February 2018 development and preparation of the mining site, import part of the machinery and equipment, connection of water and power, building part of the infrastructure. Complete the import of the machinery and equipment, complete the infrastructure, setting up machinery and equipment, carry out the operational tests, and startup mining.

2018 Q 1-2 - Expansion of gravel production

2018 Q 2-3 - Expansion into other mineral opportunities

## 11 CONDITIONS

- ❖ Possibility of conversion tokens into equity if the company (token issuer or operating company) goes public (IPO);
- ❖ Participants may purchase the tokens using cryptocurrencies (ETH);
- ❖ Participants will get 30% discount on the purchase of the products;
- ❖ In 12 months right after the ICO period, the company will start a buy-back campaign of GRAVEL COIN blockchain options, according to the token holder's desire, and the purchased tokens will be burned;
- ❖ Participants will also have the right to get a 5% discount over next cryptocurrencies sold by the issuer of new ICO campaigns. Example: when a new coin of a new project is sold during the Pre-ICO, and if the discount would be 50%, the GRV token holder will get 55% discount on the purchase of the new token, and during the ICO the buyer would get 5% discount;
- ❖ Audit services are being discussed with one of the BIG4.

## 12 TOKEN AND FUNDS DISTRIBUTION

Distribution of tokens:

100%: 100,000,000

10%: 10,000,000 - Pre-ICO Phase 1

5%: 5,000,000 - Pre-ICO Phase 2

5%: 5,000,000 - Pre-ICO Phase 3

5%: 5,000,000 - Pre-ICO Phase 4

55%: 55,000,000 - ICO

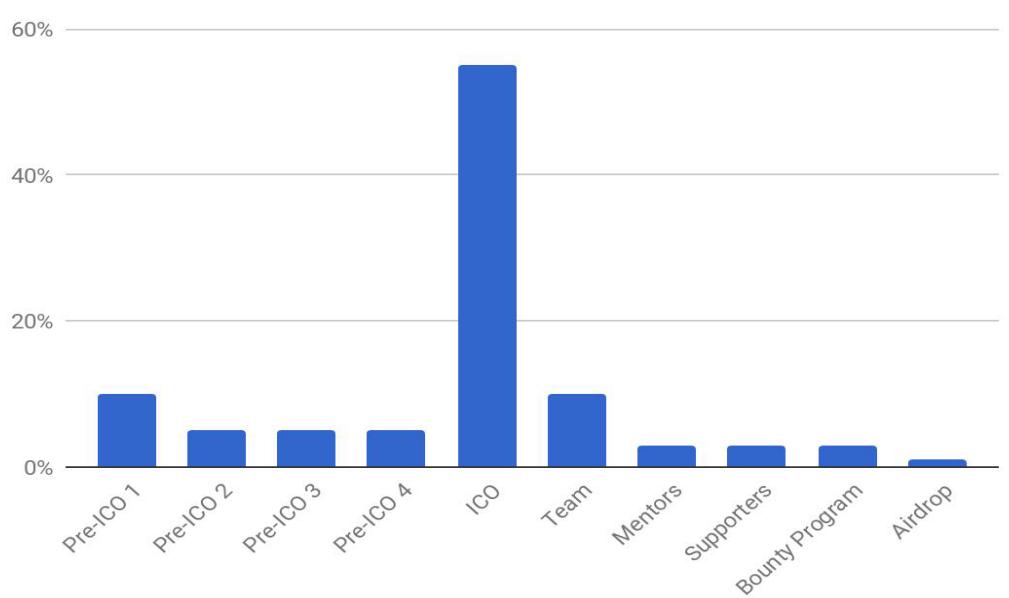
10%: 10,000,000 - Team

3% 3,000,000 - Mentors

3% 3,000,000 - Supporters

3% 3,000,000 - Bounty Program

1% 1,000,000 - Airdrop

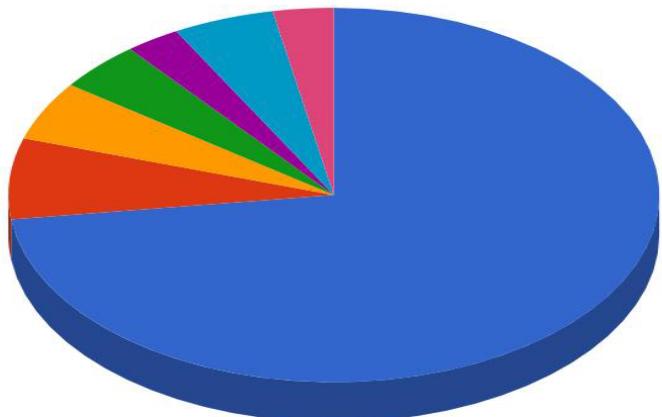


Distribution of funds:

100%: \$7,200,000  
 72.92%: \$5,250,000 - Investment  
 6.99%: \$503,000 - Legal  
 5.10%: \$367,247 - Mine Development  
 4.23%: \$304,233 - Marketing  
 2.73%: \$196,520 - Holding and Prospectus  
 5.03%: \$362,000 - Team  
 3.01% \$217,000 - Charity

## Funds

- Investment
- Legal
- Mine Development
- Marketing
- Holding+Prospectus
- Team
- Charity



## 13 ECONOMIC FEASIBILITY ANALYSIS

The nature of such mining business feasibility depends on the local consumer market. The economic decision to the investment of such type is associated to four basic factors: demand, mineral reserves, location and distance to be compatible to the acceptable freight cost.

The required equipment for the mine set up of this size, sum up approximately \$3,774,000 and \$222,222.22 additional for buildings, facilities and access ways. The mine will be managed considering an average monthly production of 30,000 tons, with 23 employees distributed as mine manager, stone crushing officer, mechanic, blaster, auxiliaries, welder, operators, drivers and security.

The projected initial investment comprises the acquisition of machinery and equipment, civil construction, equipment setup, working capital, commissions plus other expenses. There are two references, sales according to the initial production of 30,000 tons and the costs/expenses presented above, defined on the mining plan. Costs include all expenditure related to the resources used in the production, and the annual costs at \$1.870 million.

Finally, the income statement forecast could be prepared considering sales of 30,000 tons/month of crushed material at \$18.00/ton, generating a Gross Operating Income at \$6,480,000.00 p.a.

Income Statement	\$
Gross Operating Revenue	6,480,000

<b>VAT 15%</b>	<b>(972,000)</b>
<b>Net Operating Revenue</b>	<b>5,508,000</b>
<b>Costs</b>	<b>(1,870,308)</b>
<b>Income</b>	<b>3,637,692</b>
<b>(-) Income Tax 15%*</b>	<b>(545,654)</b>
<b>Net Profit</b>	<b>3,092,038</b>

\*With a possible reduction through partial tax relief.

#### Financial Indicators: Return on Assets, Net Margin and Return on Investment

Indicadores Financeiros	ROA	Margem Líquida	ROI
%	54.00	48.00	48.00

## 14 MANAGEMENT TEAM

The team is composed by:

- ❖ **Paulo Carneiro, CEO.** He is a Brazilian mining entrepreneur, well experienced in mineral prospecting, geological survey, extraction and processing, he took part in gold mining project in Ghana; founder and managing partner of Craton-Roche (Brazil) and director at StanRocc (UK), also he is Director at tokenUP Digital Cryptomarketing Agency and ICOBoard (Moscow). He is a chartered accountant affiliated to CRC (Bahia State Accounting Council), with specialisations in managerial accounting (iMBA, University of Illinois at Urbana-Champaign) and investment management (MOOC, University of Geneva).  
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- ❖ **Eli Rocha, Plant Technician.** He is a senior Brazilian electrotechnician specialised in machinery and equipment set up, operation and maintenance. He worked at several mining projects, including stone crushing, gold extraction and recovery, layout and operational procedures, all involved following technical norms. Structural, mechanical, electrical, equipment projects, and civil works. He has worked with asbestos, ceramics and other minerals. He worked in cooperation with several mining companies, as well as equipment companies like METSO.  
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- ❖ **Emanoel Apolinário, Geologist** with specialisations in mineral prospecting and geological survey at Universidade Federal de Minas Gerais / Geology Centre Eschwege in Diamantina/MG –1991, as well as in stone extraction and processing. Geologist at DNPM (Brazilian Mining Department) 1984-2004, where he was head of diverse sectors. He has carried out geological survey in the following minerals: iron ore, manganese, industrial sand, sand for construction, gypsum for plaster and cement, gold, emerald, amethyst, feldspar for ceramics, natural/dimension stone, clay and other ores. Chief geologist at the iron ore project of Paili Mineração Ltda; head of prospecting, survey and settlement of mineral water production at Industria de Bebidas São Miguel; and had worked at the companies Bahia Nigranito, Mineral Consult Brasil, Corcovado, Pedreiras do Brasil.  
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- ❖ **Ricardo Tadeu Chagas, Mining and Safety Engineer.** His professional experience includes services provided to large, medium, and small companies. Mine manager at Oliveira Maciel Mineração Ltda in Divinópolis de Goiás, Goiás, Brazil - activity: limestone extraction and

processing for corrective amendment utilisation. Processing engineer at Mineração Yukio Yoshidome S/A (MYYSA) in Calçoene, Amapá, Brazil - activity: gold ore extraction and processing. Mining Engineer at Flacol Mármores in the Pio IX, state of Piauí, Brazil - activity: marble extraction. Mining, safety and environmental planning at Craton-Roche Recursos Minerais, Brazil. Research works: Economic Feasibility for Small Deposits of Gold, UFBA, Salvador – BA 1987/88, Talc Ore Processing with High Grade of Iron, CEPED, Salvador, Brazil.

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- ❖ **Pedro Fonseca, Geologist.** He is specialised in mineral resource exploration with target evaluation and reserve development; graduated in 2004 by the Federal University of Bahia. He has worked in several research programs in Brazil, Mineração Caraíba (underground development and extraction) 2005-2006 for copper and as Chief Geologist of Braziron Limited for iron ore research, 2012-2016; also at Northeast States and Pará (INV Metals) for Au, Cu, W, Mo and others, with exposition to industrial commodities and water/soil quality. In Australia (2007-2010) he has worked mainly in the Outback (Abra Mining- today's Galena Mining) with responsibility role, for lead, copper, zinc, gold and silver. Studies on project feasibility, metallurgy, cash flow, logistics, complying with quality controls (QA/QC), international reporting standards, safety/environmental guidelines. Additionally, implemented revegetation programs and a mahogany pilot project (in 2012).

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- ❖ **Dmitry Pshenin, Marketing Director.** He is managing partner at tokenUP Agency and CEO at ICOBoard, and co-founder/investor at Polystock, all companies based in Moscow. In his background it is included: CBDO at StarTrack (2014-2015, Moscow), head of partnership at IPOBoard (Moscow Exchange, 2012-2014, Moscow), head of business development at Technopolis (Dec 2011-2012, Moscow). His education comprises graduation in economy with specialisation in development management by The Russian Presidential Academy of National Economy and Public Administration under the President of the Russian Federation (RANEPA), and specialisation in management at SKOLKOVO Academy.

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- ❖ **Martin Janda - CTO** has more than twenty years experience in Software-Development and IT-Consulting and Project Management. He was engaged in several projects for customers like Deutsche Bank, Commerzbank, Schwäbisch Hall and Allianz Insurance. Besides his proven abilities in Software-Development with DotNet-Framework (C#), Java, C++ and Oracle PL/SQL, IT Security (CeHV8 Certification of EC-Council) he is focused on the Distributed Ledger Technology (Blockchain).

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- ❖ **André Schmidt - Lawyer** at Superior Court of Justice (Berlin). His experience includes functions as research assistant at Baker & McKenzie (Moscow), working student at LucaNet AG and Fonpit AG (Berlin). He studied Law at the Freie Universität (Berlin) and is enthusiastically dedicated to the legal aspects involving ICOs, tokens and cryptocurrencies.

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## 15 ADVISORY BOARD

**Martin Glettler** has over thirteen years of experience in IT, banking, e-government and large scale IT infrastructure projects; he was previously with Santander, A1 Telecom Group, OeKB Austrian

Controllbank, the Ministry of Interior, and drafting the Gov-Cert national Cybersecurity in the Federal Chancellery Austria. A major achievement was building the fintech-startup Paymagnet, which was titled "Top20 fintech worldwide" by BBVA 2016, mentioned by TheNilsonReport, and signed deals with UATP, Wirecard and CUP. By investing into bitcoin in 2012, and ETH 2016 he dedicated a team of his company towards crypto resulting in a profound knowledge of blockchain technologies. He invented a token with additional features, the hardcoin-concept, and supports major companies going all-in-ICOs. He supports Gravel Coin, due to its sophisticated business model, which can offer high yield returns. Martin was researching Brain-Computer-Interfaces in his PhD studies, has a Master of Science from Technical University Vienna, a Bachelor in Software Engineering.

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**Dr. Max Gutbrod** is a partner in the Moscow office of Baker & McKenzie. He is a graduate of the University of Tübingen and the University of Munich, where he earned his Ph.D. in 1992. Throughout the years, Max Gutbrod has advised on M&A, climate change, energy efficiency, corporate restructuring and financial regulatory matters. Max Gutbrod joined the Berlin office of Baker & McKenzie in 1993 advising on privatization of state-owned assets in eastern Germany. In 1995 he was transferred to the Moscow office where he was managing the CIS offices of the firm from 2000 to 2003. Throughout his career Max Gutbrod has been focusing on emerging areas of legal practice and new technologies. Accordingly, he currently focuses on legal issues concerning blockchain technology and specifically ICO's. Max Gutbrod has been advising a number of promising blockchain projects and looks forward to continue his efforts in support of innovative legal and blockchain products.

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**Klaus Rainer Kirchhoff** is CEO of Kirchhoff Consult AG, Hamburg, Germany that he founded in 1994, creating more than 900 annual reports and supporting over 65 companies with their IPOs since 1998. In 2007, 09, 10, 11 and 2012 his company was ranked as the „Best annual report agency of the year“ by the LACP, USA. The consulting firm has more than 60 Employees in Europe with offices in Hamburg, Frankfurt, Munich, Vienna, Bucharest and Istanbul. He worked for major international corporations as well as for small and medium-sized enterprises. Member of the jury „The best Annual Report“ together with manager magazin, chairman of the jury „Econ Awards“, editor of the „Jahrbuch der Unternehmenskommunikation“ and Initiator „Good Company Ranking“. Since 2011 Klaus Rainer Kirchhoff is General Honorary Consul of Romania in Northern Germany.

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**Jarrod Cronin** is a crypto-investor, digital marketing specialist, and ICO marketer based in Massachusetts, US. He founded and runs Bittox.com a crypto-currency and ICO specialised news website. Since 1994 he works in the online marketing.

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## 16 ENVIRONMENTAL PLAN

The team will prepare an environmental plan including mitigation, recovery and mine decommissioning according to the environmental legislation of each region or country. It is planned to retain on each unity of gravel sold (ton), a value with the aim to also cover the costs on the improvement of the standard of living of the mines' employees and the neighbouring communities. The jobs to be created will play an important role for each country. A separate file sets the EHS - Environmental and Health and Safety - Guidelines for the project's activities.

## **17 CONCLUSION**

Financial figures and economic assessment evidence a high probability of a successful settlement of the mining project with a great demand to be explored, which commercial feasibility can be reached. The team has outstanding alternatives - stone sites - to startup the activities. Several factors will be considered based on such alternatives for the funds allocation. In Guinea the project is supported by the government, while Brazil offers less political risks and similar resources opportunities. The geology in all sites are represented by massive rocky bodies well-formed for setting up stone extraction and crushing unity aiming the production of gravel to be applied in the civil construction, renovation and building of roads, railways, among others.

Considering the scale of gravel production around 30,000 tons/month, comparing the project profitability with a fixed income investment, we may conclude that the present undertaking is highly profitable, attractive and technically feasible. Moreover, with the consolidation of this project the company will be in an advantageous position to proceed into an expansion phase in Brazil and/or in Africa in terms of output as well as adding other minerals as precious metals, as previously mentioned.