

# HELIOS COIN

PROJECT BY YOLLA INC LTD.

WHITEPAPER

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## HELIOSCOIN WHITEPAPER

# Solar Mining Cluster Technology

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### **The most efficient energy usage for mining.**

#### **DISCLAIMER OF LEGAL RESPONSIBILITY**

The purpose of this technical document is to provide potential token holders with information about Yolla INC LTD., its technology, business model and HLC token in connection with the proposed initial coin offering (ICO). The following information is not exhaustive and does not imply any contractual relationship. The sole purpose of this document is to provide relevant and sufficient information to potential token holders so that they can thoroughly analyze the company's activities when they intend to purchase HLC tokens. All relevant legal information is contained in the terms and conditions for the purchase of tokens and the token acquisition Agreement.

This white paper does not constitute an offer to sell or buy securities in any jurisdiction where it is unlawful to make such offer. Neither the Department of supervision of the operations of the financial market of Cyprus, neither the Commission on securities and stock exchanges of the USA or any other foreign regulatory authority has approved investment in these tokens.

The HLC token can be classified as a security category, since it gives the holders of tokens the right to profit from mining operations. Thus, operations with this token are subject to certain restrictions in accordance with the securities laws in Switzerland and the United States. The primary location of the HeliosCoin ICO tokens complies with the requirements of these rules and restricts access by allowing only citizens, green card holders and US residents belonging to the category of "accredited investors" to participate, in accordance with Rule 506 (4) specified in Regulation D of the Securities Act. All relevant legal information is contained in the "Conditions for the acquisition of tokens" and "Agreement on the tokens acquisition".

Some of the regulations, estimates and financial data contained in this document are forward-looking statements or information. Such forward-looking statements or

information relate to known and unknown risks and uncertainties that may cause actual events or results to differ materially from estimates or results implied or expressed in such forward-looking statements.

This technical paper in English is the main official source of information on the HLC token. The information contained in this document, may from time to time be translated into other languages or used in written or verbal communications with existing and potential community members, partners, etc. When translating or similar communications certain information contained in this document may be lost or distorted. The accuracy of such alternative communications is not guaranteed. If you encounter any conflicts or inconsistencies between such transfers and communications and present official English language text shall prevail the provisions of the original document in English.

## **BRIEF OVERVIEW**

At the stage of formation, crypto-mining was a well-distributed network of several thousand private miners, whose work was regulated by transparent rules. Their activities were not detrimental to the climate, as their power requirements were low. Now everything has changed — the exponential growth of cryptocurrencies has led to a sharp increase in energy consumption and mining concentration in countries with low social and environmental standards, where electricity is produced mainly using fossil fuels. But even worse is the fact that the concentration of mining resources in several major corporations distorts the former democratic decision-making process in these networks — changes in protocols and hard-fork risk to be influenced by the economic interests of a few players.

Yolla INC LTD.. developed a system of autonomous clusters for mining (Solar Mining Clusters) that can consume electricity directly on renewable energy sources. Our clusters are created on the basis of Off-Grid (Autonomous) solar generators, immersion cooling units, equipped with mining equipment, communications and automation functions inherent to the fourth industrial revolution. They are completely self-contained, support remote control and have a revolutionary cooling system that consumes approximately 2% of the total power consumption of the system. In addition, this high-tech solution is fully integrated into existing global logistics systems and guarantees our investors a unique trading offer in the cryptographic world-access to free electricity wherever they are (\* within the solar belt).

- Autonomy means that our modules operate on electricity, which they themselves produce.

Fewer risks than traditional mining operations — our Clusters are capable of mining a wide range of cryptocurrencies with different algorithms.

- The flexibility of the system helps us to unite the two most important sectors of the 21st century-blockchain technology and renewable energy sources. By leveraging the exponential growth of both sectors, we contribute to the preservation of the climate and the well-being of our token holders. This is the physical embodiment of the spirit of blockchain — a reliable and decentralized system that can withstand the destructive effects of government policies, price structures and energy supply.

It has all the necessary competitive advantages, follows a decentralized approach and grants rights to activities that were not possible under the pressure of the concentration of mining capacity.

## INFORMATION ABOUT ICO

The HLC token is an Ethereum token based on the ERC-20 standard. HLC tokens grant their holders the right to:

getting 100% revenue from our own mining operations in two stages:

- 75% are paid immediately
- 25% invested to increase future payments

receiving 35% of HeliosCoin's revenue from mining operations of third parties

voting and veto power in making important decisions regarding the company's strategy

Tokens are offered for 92 days: from July 1<sup>st</sup> 2018 to October 1<sup>st</sup> 2018.

Company Yolla INC LTD.. starts HeliosCoin ICO - its the world's first Autonomous Mining solution focused on alternative energy sources. The proposal will be open to the world community. Restrictions apply to residents of Germany, as well as to investors from the United States.

<b>Total amount of tokens:</b>	5 million tokens (Unallocated tokens will not be created)
<b>Token price at the release:</b>	0.001 ETH
<b>Token Distribution:</b>	<p>Bounty program - 3% of distributed tokens</p> <p>Team of founders -10% to the team of founders</p> <p>Reserve - 5% reserve buyback fund</p> <p>Contributors - 82% of the issued token</p>
<b>Official website:</b>	<a href="http://www.helioss.io">www.helioss.io</a>
<b>Accepting:</b>	BTC, BTH, BTG,LTC,ETH, WIRE TRANSFER
<b>PRE-ICO Start date:</b>	May 1 <sup>st</sup> 2018
<b>PRE-ICO Expiry date:</b>	June 1 <sup>st</sup> 2018
<b>ICO Start date:</b>	July 1 <sup>st</sup> 2018
<b>ICO Expiry date:</b>	October 1 <sup>st</sup> 2018

**Discounts:****Private sale:****PRE-ICO:****ICO:**April 18<sup>th</sup> 2018 to April 30<sup>th</sup> 2018 the bonus 20%May 1<sup>st</sup> 2018 to June 1<sup>st</sup> the bonus will be 20%July 1<sup>st</sup> 2018 to July 8<sup>th</sup> 2018 the bonus 20%July 9<sup>th</sup> 2018 to July 16<sup>th</sup> 2018 the bonus 15%July 17<sup>th</sup> 2018 to October 1<sup>st</sup> 2018, the bonus 10%

The end date of token distribution is October 1<sup>st</sup> 2018., 12:00 GMT

**FUNDS USAGE:**

91% — investments in Autonomous clusters of Solar Mining Clusters

9% — for research, development and administration

## RESTRICTIONS FOR INVESTORS

We are convinced that the entire world community deserves a share of crypto-mining profits, not just a few anonymous players from oligopolistic cartels in authoritarian societies. We believe that crypto-mining should be carried out through decentralized, democratic and evenly distributed operations open to all who are willing to support and benefit from this network.

Based on these principles, we created the HLC token. It grants investors the right to receive full payments as a result of our own mining operations. As a result, the tokens can be treated in most jurisdictions as securities. In accordance with the EU and US securities laws, the following three categories of investors may become token holders.

- **Investors inside and outside Cyprus if they:**

- do not have a US passport
- do not have a USA Green Card;
- they are not U.S. residents.

- **Accredited investor**, pursuant to Rule 506 of Regulation D of the U.S. Securities Act. These are investors with their own capital in excess of \$ 1 million, excluding their primary residence or with a net income of more than \$ 200,000 (if married - with a combined income of \$ 300,000).

- **Investors who are residents of Germany**, limited investment opportunities are available-just over 200,000 euros.

The guidelines of the securities and exchange Commission (SEC) On regulation 506(c) of Regulation D require the Issuer to take "reasonable steps" to ensure that investors meet the above criterion. When conducting an ICO, we are obliged to verify compliance with SEC requirements — each investor must submit a scanned proof that he is an accredited certified lawyer or a certified securities accountant. If such confirmation is not provided, the previously transferred funds will be transferred to the wallet or Bank account of the investor from whom the payment was made.

These restrictions on token holders run counter to our intention to give everyone equal opportunity to participate in our crypto-mining operations and to provide a competitive advantage to the Autonomous mining cluster system. However, we must comply with



the laws and regulations governing securities transactions. In order to bring our concept of equity into line with these rules, we are working to convert the token into a publicly traded asset. Immediately after the ICO Yolla INC LTD. will start preparing the prospectus, will be registered in SEC and will apply for listing of tokens as securities on regulated exchanges. After that, the HLC token will finally be available to everyone, provided that the SEC gives the green light.

## TOKENS

HLC tokens are based on the ERC-20 Protocol, which determines that 5 million tokens with a nominal price of ETH 0.001 will be issued. The final distribution is set as follows:

- 82% to the investors
- 10% to the founders
- 5% to the Yolla INC LTD., as a reserve fo buyback
- 3% Bounty program

Tokens that are not distributed to investors, founders or companies will not be created. In other words, the maximum amount of tokens will never exceed 5 million, while investors are entitled to 82% or a maximum of 4,100,000 tokens, founders — 10% or a maximum of 500,000 tokens and Yolla INC LTD. — 5% or a maximum of 250,000 tokens (as a reserve Fund).

Tokens give the right to vote. From time to time when Yolla INC LTD. will make strategic decisions regarding mining operations, the company will be able to put those decisions to a vote. Token holders with veto power over the company's proposals will take part in the voting. The voting process will be established based on the HLC token smart contract.

Tokens give the right to receive dividends from mining operations. Dividends are calculated only on the basis of net profit from mining operations. They are not based on the statement of profit and loss (P&L) of the company Yolla INC LTD., which can introduce risks that are not associated with mining.

## BUSINESS MODEL

NOTE. Full financial model can be found [here\(.xlsx file\)](#)

The Yolla INC LTD. business model for the mining consists of two components.

**Personal operations (PO)** include the business activities of the Yolla INC LTD., associated with the investment, ownership and operation of Autonomous clusters of mining. Token holders are beneficiaries of 100% of their own revenue.

**Third-party operations (TPO)** - these are activities where an independent company (such as a utility or an investment Fund) acquires clusters that are managed by Yolla INC LTD.. In such operations, Yolla INC LTD. will receive a share of the rewards received during mining. 20% of proceeds from this business model will be distributed among token holders.

Revenue from own operations consists of the total amount of remuneration less the cost of operation of solar panels. These costs include, but are not limited to, land lease costs for clusters, replacement of equipment to ensure continuity of mining operations at Yolla INC LTD. (for performance stabilization and MCU calculations, such as increasing complexity or decreasing efficiency directly related to the mining process), depreciation and maintenance charges for the company's overhead costs. The calculation of revenue from third-party transactions depends on the agreement with the third party, but excludes depreciation.

100% of proceeds from own operations and 20% of proceeds from third-party operations will be funds distributed among token holders. But, in our opinion, this is not enough. In order to accelerate revenue growth, we have decided to invest half of our annual revenues in the creation of new Autonomous mining clusters in order to lay the Foundation for additional revenue and exponential growth. Three-quarters of the revenue will be distributed immediately, i.e. on a weekly basis.

## USAGE OF FUNDS

We have calculated that the cost of ICO (legal advice, production of advertising materials, personnel for marketing and communications, marketing costs, including advertising on social networks, banners, paid articles, etc.) will amount to 500 thousand euros. Most of this amount was received prior to the launch of our website and the official pre-sale. We expect to fully cover the costs of the ICO in early June. Thus, contributions during the main ICO will be used exclusively for investments and construction of new solar clusters, cooling systems and increasing mining capacity.

91% of the funds of the main ICO will be used for the purchase of equipment for mining, solar power plants with mW capacity, immersion cooling systems, the production of modules by contractors and the deployment of modules on leased lands. The current cluster capacity of 50 kWh, equipped with immersion cooling system, with equipment for mining based on our experience costs today 60 000 euros. But these amounts may change due to changes in equipment prices and market conditions. Of every 1 million euros received during the main ICO, 910 thousand euros will be invested in equipment, which, based on the current situation, is converted into 14-20 Autonomous mining clusters.

During the first couple of months of deployment, overhead and administrative costs will not be fully covered by mining revenues. Thus, we leave 9% of the funds received from the ICO to the deployment stage (to cover the costs of administration, research and development, legal procedures for changing the status of the token, so that it becomes available) and as the main reserve.

The purpose of Yolla INC LTD. is to outperform competitors and introduce new ways of fully Autonomous mining, improve the efficiency of mining equipment by at least 35% through the use of immersion cooling technology. We intend to use our clusters as independent and self-sufficient units for constant and stable income in places with tropical and subtropical climate.

Finally, we want to transform the Solar Mining Cluster technology, which is completely focused on mining, into a data center technology with a much broader scope of application in the developing blockchain market. The research and development budget is part of the administrative budget.

In the interests of our investors, we plan to make HLC token available to the General public, in addition to accredited and qualified investors. This requires the development of a prospectus and a complex settlement process with financial authorities in different jurisdictions. Our priority jurisdictions are the EU, the Middle East, the US and Asia. We will allocate funds for this process from the administrative budget.

## GLOBAL ENERGY STRUCTURE

The crypto-mining business model is largely dependent on energy sources. The price and availability of electricity are two of the most important factors for mining companies. That is why we have focused on the autonomy of the system.

At the macroeconomic level, the hunt for cheap energy has led to the concentration of mining operations in countries with low socio-economic and environmental standards, and hence cheap electricity from fossil fuels. Given the negative consequences of the development of this cheap "dirty" energy, we can say that the mining of cryptocurrencies significantly contributes to climate change. At the same time, the concentration of mining operations in several countries undermines the system of distributed registries and increases the risk of manipulation.

At the level of microeconomics miners have become vulnerable to fluctuations in energy prices and changes in legislation. The competitive advantages of many companies in this sector depend on the willingness of a small group of regimes to allow operations with cryptocurrencies, to maintain low electricity prices and favorable legislation. It is obvious that the business model of the industry is in the early stages of development. We are moving mining to a qualitatively new level-the level of full autonomy and independence from state power systems.

New generation mining operations should be climate-friendly, independent of local price and regulatory changes, more profitable and decentralized. Hence, the business model is based on the technology of Yolla INC LTD.. which combines environmentally safe energy sources with economic feasibility on a global scale, is part of this new generation.

## DIGITAL CONSUMPTION

The information technology ecosystem is one of the largest consumers of electricity in the world. It consumes about 1,500 TWh of electricity per year-so much is produced jointly by Germany and Japan, or almost 10% of the electricity produced worldwide (1). In this sector, only the power consumption of cloud technologies is 416 TWh (2) (3), which is approximately equivalent to the carbon footprint of the entire aviation industry, besides it is growing rapidly — the power consumption of cloud technologies doubles every four years. By 2020, it will grow to 1400 TWh per year, and by 2030 can exceed the energy consumption of China and the U.S. are the largest consumers of electricity in the world. Over the next decade, electricity may become a scarce resource, and as a result, prices may rise, if not globally, in certain places and at certain times. The reason for this bottleneck is the power grid, not the generation of energy.

In the field of cloud technologies, cryptocurrency mining is growing faster than others. The energy consumption of bitcoin and Ethereum technologies rose sharply for seven years from almost zero in 2010 to 19.2 TWh in 2017 — the same amount of energy is produced by Iceland or Puerto Rico. The energy efficiency of ASIC chips and graphics processing units (GPUs) is growing rapidly, but it is ahead of the increase in transactions and market capitalization. While this exponential growth provides miners with excellent opportunities to earn rewards, competition for energy is also increasing due to the energy consumption of the information technology ecosystem. Only those who have safe access to affordable electricity will be able to win. Our Clusters allow you to bypass the problem of finding cheap electricity and start using your own - free. The divine energy of the sun.

## **THE GLOBAL ENERGY MARKET**

Unlike coal, oil and liquefied natural gas, which can be delivered anywhere, there is no global electricity market. The electricity market is highly fragmented. It consists of thousands of regional subsystems in different jurisdictions, where excess capacity alternates with deficit. While global energy demand continues to grow rapidly, huge disparities remain between industrialized countries and the rest of the world. Demand for electricity in the Organization for economic co-operation and development (OECD) countries will increase by a total of 38%, while demand in non-OECD countries will double. This reflects the difference in GDP growth rates of 2.0 per cent in OECD countries and 4.2 per cent in non-OECD countries (6).

Part of this increase in demand will come from electricity generated from fossil fuels, but renewable energy will increase its share in the energy mix from 25% to 33% between 2012 and 2040, and will double production in absolute terms. This change in 28 years does not seem destructive. Nevertheless, this sector is undergoing transformation. Globally, 90 per cent of all renewable energy sources are hydropower, which is expected to grow slightly due to natural constraints. This means that the rest of the growth will be provided by another sector — wind and solar power plants. The volume of electricity generated by photovoltaic power plants (both private and public) increased exponentially from 100,000 MW/peak photovoltaic power in 2012 to 390,000 MW•peak in 2018. This will have far — reaching consequences-governments trying to stabilize energy markets will set more regulations, and electricity prices will vary widely across countries, energy sources, and customer categories. Thus, price volatility will increase as a result of natural laws and government intervention.

This volatility will continue during the transition period from the predominant use of fossil fuels and centralized electricity generation to the predominance of decentralized renewable energy sources. In the long run, the global electricity market will be driven by new technologies, balancing, storing and selling electricity between several intelligent

authors (possibly using blockchain), who will be much better able to achieve equilibrium than government regulation.

Given these circumstances, we can say that flexible players will be able to better cope with this new energy world. The world of renewable energy.

## **PRICE DISTORTIONS AND OPPORTUNITIES**

Photovoltaic power plants (PV) are the fastest growing source of renewable energy. This is due to lower prices for modules from \$ 76 per peak watt in 1977 to \$ 0.35 in 2017. This drop in prices was initially promoted by technological improvements, and then it accelerated as a result of attractive preferential tariffs, increased efficiency due to increased production scale and Chinese competition. In the meantime, preferential tariffs fell following the fall in module prices: the cost of 1 kWh produced by the photovoltaic power plant was \$ 0.40 in 2005, and currently is \$ 0.08 in most OECD countries. For the last couple of years, since the solar zone of the planet, the countries have gradually reached the network parity, i.e., solar energy has become as cheap as in the grid (production cost + transportation and charges). This process went even further. In India, Chile and the Middle East, the purchase price of electricity for photovoltaic power plants is only 0.03-0.04 US cents per kilowatt-hour.

The average electricity price for photovoltaic power plants is already low, but certain conditions on the spot market can reduce it even more, sometimes making it negative. The very nature of wind and solar, the main sources of renewable energy, puts pressure on the existing energy infrastructure and has serious implications for national networks and price structures. In other words, the widespread use of wind and solar energy creates opportunities for extremely low prices per kilowatt-hour. That is why, having our own photovoltaic power on mining clusters, we remove from the equation the article of electricity costs, thereby increasing the profitability of mining.

## **SUMMARY**

While electricity prices in non-OECD countries are under pressure, the picture in the OECD is much more diverse. OECD European countries have introduced a number of taxes and fees into the structure of electricity prices. They will be partly devoted to financing old photovoltaic power station projects, which will earn 0.20— 0.40 euros or dollars per kilowatt-hour in the next 10-15 years, and partly to the development of the electricity network and the financing of new power lines for renewable energy. Consumers in Cyprus pay up to 0.65 Euro cents per kilowatt-hour, while electricity generated at the source costs 0.09 Euro cents for coal or gas power plants and \$ 0.02 for the latest photovoltaic power plants. Simultaneously, the government has introduced

large benefits to maintain the competitiveness of its industry to the melting furnace and car manufacturers could get cheap electricity.

The regime regulating obsolete preferential tariffs, subsidies and benefits distorted the market and made it vulnerable to policy changes. For example, the European Commission considers the system of benefits in Germany as a violation of European norms on freedom of competition and can even force the government to change it. In addition, social institutions put pressure on a system that supports the interests of large companies, ignoring the interests of small consumers with low incomes. Change in prices can happen almost instantly - in both directions.

The European Union, India, Chile and the Middle East are just some examples of the unevenness, risks and opportunities that affect the picture of the global electricity industry. Our research shows that these markets are undergoing profound changes that will force energy consumers to adapt in a relatively short time frame.

Exponential growth in energy consumption in the IT ecosystem occurs at a time when the energy market is in transition. The development of renewable energy sources in the energy structure creates ideal opportunities for development.



# HELIOSCOIN APPROACH

## OUR VISION

We believe that the innovation of the system is necessary for cryptocurrencies to get mass recognition. We believe that future mining operations should be decentralized to reduce their dependence on the laws of one government, powerful players, fossil fuels or nuclear energy.

For future crypto-mining operations, it is necessary to reduce the systemic risks associated with binding to certain coins or mining pools. Therefore, the company Yolla INC LTD. aims to bring back a crucial force crypto - community. Individuals should be able to participate in crypto-mining without huge investments in equipment and technology. In addition to providing broad ownership of mining operations, Yolla INC LTD. is committed to ensuring that the community is involved in key mining decisions. We strive to remove obstacles to attract a wider audience to the crypto community.

Yolla INC LTD. offers everyone the opportunity to participate in the future of blockchain technology and lays the Foundation for the future of crypto-Mining by developing highly mobile mining modules with low maintenance requirements and offering our community a voice in the selection of locations and coins for mining.

## OUR APPROACH

The technology developed by us, represent Solar Mining Clusters — modular, mobile, flexible, low maintenance demands, autonomous, closed system designed for perfect hashing.

Our flexibility strategy is based on the following three technologies.

- **Found decentralized autonomous mobile mining modules (Solar Mining Clusters)** have the automation functions of the fourth industrial revolution, a fully modular, scalable architecture and require minimal maintenance. They operate completely autonomously and are able to adapt to different climatic zones. These modules are based on state-of-the-art photovoltaic panels, have a highly efficient, trouble-free immersion cooling system, consume more than 100 kW (depending on configuration) and can convert energy into cryptocurrencies or be used in other data applications.
- **Our computing control point (Main Control Unit) or HeliosMiner application** is used to manage automated decentralized operations of Autonomous mining clusters around the world. It supports our Solar Mining Clusters, finding the optimal strategy of mining taking into account the trading rate of cryptocurrency, mining complexity, generation of equipment and many other factors.



Together **Solar Mining Clusters** and **Main Control Unit**( later MCU) create a complementary system.

## **VALUE PROPOSITION**

Yolla INC LTD. has developed fully automated (corresponding to the fourth industrial revolution) Autonomous mining clusters in standard (sea) shipping containers certified in accordance with the requirements of the Convention on safe containers (CSC). These containers can be delivered anywhere in the world within days (for most transport routes) or weeks (for transports between continents).

## **LOWEST ELECTRICITY PRICE ON THE MARKET**

Our mining modules use free renewable energy directly at the source — in the desert or other remote locations with tropical or subtropical climate. This allows us to completely eliminate the cost of electricity, thereby increasing the profitability of mining.

## **ADVANCED COOLING TECHNOLOGY**

We have designed, integrated and tested a fundamentally new, self-regulating immersion cooling system together with our partners from Russia (BeeMiners) specifically for mining with blockchain. This unique cooling system provides best-in-class energy efficiency, consuming only about 2% of the total energy consumption of the system while increasing the efficiency of mining to 35%.

## **TRUE SCALABILITY**

From the first day of development in our production opportunities of mass production and scalability were put. In addition to our own components developed by Yolla INC LTD. (for example, PCBs for control or cooling systems), our stand-alone mining clusters utilize a wide range of standardized components that facilitate mass production. Investment in software to support the trend of our growth by providing the necessary funds to operate large clusters. Through a network of partner firms, we have been able to provide priority access to components in large quantities, including GPUs and photovoltaic panel manufacturers.

## **INTERNATIONAL REDUCTION RISK**

A recent comparative analysis showed that the centralization of the hashing power in the hands of a few players, miners of large and small scale estimated as high risk. But Yolla INC LTD. is able to "mine" a wide range of cryptocurrencies, our Autonomous Mining Clusters reduce the concentration of computing power, and reduce dependence on one

government (for example, changes in legislation), one energy supplier (for example, lack of one or more of the costs of cryptocurrency to zero.

## **INTELLECTUAL POWER GRID SUPPORT**

Mobile mining modules are designed and manufactured to work in remote locations (the "fourth industrial revolution"), on their own energy sources — solar photovoltaic panels.

The key parameter for crypto-mining is the price of electricity, while the rewards and depreciation of equipment are the same for each market participant. For commercial miners, the cost of data center infrastructure is no less important. Yolla INC LTD. takes both of these cost factors into account in the concept of mobile mining modules, creating a simple, reliable and cost-effective modular and stand-alone infrastructure for all operations, which is characterized by flexibility and standard sizes necessary for the deployment strategy around the world.

## **OPERATIONAL MODEL**

### **PERSONAL MANING OPERATIONS (PMO)**

We manufacture, administer and operate our own fleet of Autonomous mining clusters. Our profits are determined by the rewards less depreciation. Capital expenditures of Yolla INC LTD. are financed by our investors in ICO. In turn, token holders are entitled to 100% of the proceeds, 25% of which Yolla INC LTD. reinvests in order to increase the market share in the future and maximize revenue.

The distribution of these dividends will be carried out weekly: 75% of the profit will be paid, and 25% will be re-invested in clusters to increase the volume of dividends of Yolla INC LTD. community. Cluster activity will be maintained as long as it is profitable.

If the cluster configuration includes 50% of ASIC chips and 50% of GPUs, the total return on investment of Yolla INC LTD.'s own mining operations is 181% (calculations as of November 24, 2017.)

A detailed overview of the main assumptions, cost factors, and profit data is provided in the Annex.

Own operations in themselves highly profitable. We are currently in talks with a number of countries in the Middle East. Their interest lies in the exploitation of Autonomous mining clusters in the framework of vertical integration to ensure their profitability in a complex environment of energy markets.

## **THIRD-PARTY OPERATIONS (TPO)**

In case of third-party operations, production and maintenance of clusters is carried out by Yolla INC LTD., but investments are made by external partners called "third parties". As "third parties" there may be investment funds or corporations who are interested in increasing profits. By converting solar energy into electricity, a simple resource, into sophisticated crypto — mining services, corporations lower the value chain and increase their income in mining. In addition to third-party operations (TPO), we offer companies wishing to increase their income, our experience in mobile crypto-mining, as well as the capital base and increase profits for token holders. Company Yolla INC LTD. will charge a percentage of the total revenues received from mining by a third party, to ensure the operation of the clusters, and to pay to the holders of tokens 20% of revenues.

## **PROBLEMS IN THE BLOCKCHAIN COMMUNITY**

The ecological footprint of traditional mining operations is enormous — the total amount of energy consumed during the mining of Ethereum and bitcoin is as large as the consumption of Nigeria, whose population is 180 million inhabitants (about 2% of the Total population). In July 2017, one of The articles in the Guardian claimed that one bitcoin transaction "consumes as much energy as 1.57 households in the US in a 24 — hour period-it's about 5,000 times more energy-intensive than a regular credit card payment" (10). Traditional mining operations of large and small scale receive the energy of their conventional electric networks-on the basis of the traditional energy structure. At the global level, fossil fuels continue to dominate the energy mix, contributing to global pollution and climate change. In order to implement the blockchain concept and make this technology an infrastructure for future transactions, it needs to improve its energy consumption profile by maintaining its basic principles: distributed register and capacity redundancy. This is a big problem for the whole industry. But we, the team of Yolla INC LTD., are convinced that we can help make the world a better place, thanks to our mobile, flexible and independent system that consumes unused renewable energy resources.

In addition to our environmental ambitions, we want to support the original idea of blockchain and cryptocurrency — a distributed structure in the hands of many, not huge clusters of computing power in opaque jurisdictions with authoritarian rule. The very nature of our mining clusters ' mobile fleet allows us to create a widely distributed system and give the community of token holders the right to vote so that important mining decisions are made by the community, not by magnates.

## LONG TERM VISION

We believe that next-generation power networks should be intelligent dynamic systems linking out-of-date power plants with large-scale renewable energy resources, as well as networks of distributed producers and energy consumers. At the "last mile", such a system will rely on an advanced measurement infrastructure (AMI) with intelligent counters and intelligent machines as agents. They will buy and sell energy through smart contracts, using roofs with solar panels in households, like power plants, and car batteries, like storage. The fourth industrial revolution in the energy sector will lead to the fact that the consumer, who was in the 20th century an outsider, will become an active player in a breathing and flexible energy body, where management is carried out using smart contracts, and crypto-currencies are used for payment.

In such a world, the analysis of energy prices on a global scale is of key importance for effective crypto-mining and data center operations.

## SCALABILITY

A recent study in Cambridge found that many major miners are very concerned about the scalability of their operations. We have developed all our processes, keeping this in mind, and have created a universal concept of high scalability. We use a modified mobile structure certified to ISO standard and adapted to the needs of Yolla INC LTD. from the very beginning. In cooperation with reliable Chinese steel companies, all of the nodes built are carefully prepared and are equipped with most of the required hardware (including a proprietary array of sensors, Yolla INC LTD., the mechanisms of remote control system and stacking equipment Mining Ltd Helios). The clusters Yolla INC LTD. ready for installation of computers. This phase is currently under way in the European Union. After this final stage of the deployment of photovoltaic panels and immersion cooling installation, which uses a simple system of immersion mining equipment Yolla INC LTD., the module can connect and start working anywhere in the world with tropical and subtropical climate. For example, it can work in the desert or in a suburban industrial area. The flexibility of Park Yolla INC LTD. also provide adjustable 380-400 VAC industrial standard connectors that can be used in any installations by dynamically adjusting to suit your needs. In the post-distribution phase, the module can even be used effectively only to convert excess energy, such as excess capacity. This is a small bonus, maybe we can sell electricity to the city power grid, which will eliminate the idle time of the equipment.

Due to the low prices of standard - dependent inverters, they are often used in photovoltaic power plants to create an ideal low-voltage AC network for the use of photovoltaic power plants. After the initial depreciation phase, during which the modules

are used around the clock, the use scenarios with 100 percent Autonomous power supply become profitable.

## **BRIEFLY ABOUT OUR BUSINESS PLAN**

Autonomous mining clusters of Yolla INC LTD., Solar Mining Clusters, are located in places of a stable solar belt with tropical and subtropical climate. Clusters provide the income, carrying out mining some cryptocurrency. Own software solutions Yolla INC LTD. determine the most profitable coins for mining, and can instantly switch between coins.

To Finance these operations, revenues from HLC tokens will be used as follows: 91% of the funds directly to expand the cluster Park, as well as an increase in electrical capacity (photovoltaic panels); the remaining 9% are reserved for research and development, as well as administrative costs.

The token holders are the beneficiaries of 100% of the proceeds generated by the clusters. The distribution of dividends will take place on a weekly basis. 75% of the profits will be paid and 25% will be used to reinvest directly into the clusters in order to guarantee exponential growth of profits for the Yolla INC LTD. community. There are no temporary restrictions on dividend payments to token holders; clusters will remain active as long as their work is profitable.

Profit is defined as income less expenses, where income is the reward for the extraction of cryptocurrencies, and expenses consist of fixed and variable costs. A detailed overview of the cost factors can be found in the tables below. Variable costs include, for example, on-premises maintenance, lease, and monitoring.

To install the MMU with a combination of miners on the basis of ASIC chips and graphics processing units (GPUs), the total return of the investment from its own mining operations is 172% (based on the rate of BTC and ETH for 09.11.2017). A more detailed explanation of return on investment, cost structure and key performance indicators can be found in the next section (Technical specifications and equipment efficiency).

In addition to its own mining operations, Yolla INC LTD. offers a model of investment for third parties. In addition to the sale of tokens (ICO) registered a great interest in the acquisition of clusters Yolla INC LTD.. Even with this third-party-oriented model, 20% of the funds earned through third-party transactions will be distributed to HLC token holders on a monthly basis.

## **SOLAR MINING CLUSTERS (SMC)**

### **PRINCIPLES OF DEVELOPMENT**

Yolla INC LTD. has developed core technologies ranging from printed circuit boards to middleware levels and Solar Mining Cluster applications, based on the following clear set of development principles and guidelines.

- **MOBILITY**

The company's vision can be realized only when each component is consistent and supports our concept of mobility and autonomy with increased structural strength (for example, the protection of hardware components from vibration and transportation problems). This is largely implemented through the use of components developed and tested in the company.

- **AUTONOMY**

Autonomy is one of the fundamental principles of the architecture of Yolla INC LTD. to ensure independence from external power grids. Cluster autonomy and the creation of a fully modular environment are prerequisites for the success of our mining clusters.

- **ECONOMIC EFFICIENCY**

A device with the highest performance does not always provide the maximum benefit if the cost of electricity is an important factor. We have created the devices with the highest return on investment with the lowest risk overall. In the development of basic technologies, a careful selection of well-designed solutions was carried out with a clear focus on improving the return on investment in the shortest possible time and profit throughout the life of the device.

- **SERVICEABILITY**

Keeping operating costs low is key to success. Therefore, for equipment maintenance, preference is given to the automation capabilities provided by the fourth industrial revolution, rather than the use of personnel, where possible.

- **PLUG'N'PLAY**

Replacing, removing, adding, or moving parts and devices should not affect the functionality of the system or any of its components. To this end, we developed a fairly complex system of automatic configuration when connected, Plug and Play, tracking the connected components and supporting their balancing.



- **PLUG'N'MINE**

The main concept of the development is that the deployment of the cluster to full-scale mining should take only a few hours, after the deployment and installation of photovoltaic panels, installed immersion cooling and the Internet. Due to the sequence of automatic start after a simple connection of this device will quickly start mining.

- **EXTENSIBILITY**

Simple engineering solutions based on functionality enable exponential scalability, allowing for virtually unlimited expansion of our mass production system, as well as a short time to market.

- **COOLING OPTIMIZATION**

The cooling system is an important factor for any data center and an essential component that determines its efficiency. Maintainability and fault tolerance systems play a key role for Autonomous mining operations. Therefore, we have created an ideal immersion cooling system for regions with average temperatures of + 35 + 45 degrees, which maintains the performance of the module even at an outside temperature above 45 °C.

The cluster is fully automated and does not require manual operations for normal daily operations. All of them are performed under the control of modular control systems that are connected to a Main Control Unit, which controls their operation. The control center is the brain of stand — alone clusters-it retrieves information about all connected and connected IOT devices, combines the information it receives, and manages devices at various levels.

## **HELIOS MINING WORKER**

The smallest element of the Yolla INC LTD.. ecosystem — it's a working mining system. They can be an ASIC chip-based system, a computer system for mining based on GPUs, or other mining systems or cloud technologies that may appear in the future.

## **HARDWARE OF MINING EQUIPMENT**

The first generation of Helios Solar Mining Cluster contains a computer system for mining, which is a device optimized for mining, configured for optimal return on investment. To this end, we increase the clock speed of GPUs, test the double-mining strategy, and reduce the amount of overhead in the operating system. New mining configurations based on this hardware can be automatically deployed on all working instances worldwide using our HeliosMiner application.

## **EQUIPMENT MAINTENANCE**

One of the main valuable qualities of our mobile mining modules is the minimum level of maintenance costs and its complexity. There are fully automated systems that detect faulty computer systems, analyzing IP addresses and specifications, so any maintenance specialist can find faulty equipment, spending little time. Yolla INC LTD. even can instantly detect the faulty graphics processors in software, when they cease to perform its intended task with the expected performance. We have taken another step by changing the BIOS names (unique identifiers) for GPUs and equipping them with led indicators that translate the problems detected at the software level into physical signals. Thanks to this, even untrained service technicians can quickly and reliably detect and replace faulty hardware components.

These mechanisms are only a small part of the measures taken by Yolla INC LTD. to reduce maintenance to a minimum. Clusters in General are designed so that they could work anyone with a basic understanding of hardware and software processes, having a short briefing. For example, all mining modules are configured automatically in the Plug and Play and Plug and Mine styles, so they start working as soon as photovoltaic panels and an Internet connection are installed.

The Yolla INC LTD. goal with regard to the maintenance process is a high degree of standardization and automation of all operations. This means that the maintenance activities are carried out under the direction and control of our software infrastructure that provides a clear definition of priorities, visual guidance, effective monitoring, and testing, as well as the escalation of all maintenance operations.

## **AUTOMATED AUXILIARY COMPONENTS**

### **AUTOMATED INTERNET CONNECTION (AIC)**

After power is connected, an automatic Internet connection via satellite, LTE and/or WIFI is provided. Our satellite communication system, which is controlled by an integrated system with automatic start-up procedures and an antenna control algorithm based on the received signal level (RSSI), supports automatic positioning of the antenna in the direction of the corresponding satellite. In total, this procedure takes less than two minutes. In addition, an antenna-equipped LTE/ UMTS access point is activated, so the module is connected via LTE network or satellite channels, choosing the preferred type of communication in accordance with the pre-set tariff plans (with support for automatic failover).



## **AUTOMATED DOOR LOCKING SYSTEM (ADLS)**

Physical access to the control unit door is protected by an electric door locking system. ADLS is a separate system that can run without an MCU, but it informs the MCU of its state, and the MCU can manage ADLS. The system supports access codes and transponder cards with RF identification (RFID).

## **AUTOMATED SECURITY MODULE (ASM)**

All external and internal angles are monitored by wide-angle cameras under the control of ASM.

## **SENSORS IN THE CLUSTER**

### **VIDEO SURVEILLANCE AND AUTOMATION**

When developing in Yolla INC LTD., special attention is paid to reducing the workload of the operator to the limit, so minimum operating requirements for personnel and their training are imposed. The tasks related to the functioning of the decentralized network were distributed in a simple and reasonable way through the implementation of the strategy of maximum hardware automation. Therefore, on-site personnel should only perform the following tasks:

a) power supply connection, b) input of network authentication keys, C) replacement of faulty hardware modules when receiving automatic e-mail notification.

All processes within the module are fully controlled remotely, only critical tasks, including maintenance of computing units and detection of faulty components, carried out by experts and

### **INTELLIGENT MINING**

One of the main decisions is the choice of coins for mining. This decision depends on the following factors:

- current price / exchange rate of the coin
- degree of difficulty
- price of electricity on site
- hash algorithm
- location and temperature conditions
- generation of equipment in production systems

These conditions must be taken into account when deciding on the best return on investment.

Intelligent mining is the result of an automated process that maximizes the potential for real-time accounting of these conditions. MCU often analyzes the current situation and switches to a suitable mining strategy. The decision is based on location, so the decision is made for each cluster separately. This can lead clusters to different mining strategies. The MCU can even execute two different strategies to check which one works best if it is impossible to predict accurately.

## **CRYPTO-STORAGE**

CryptoStorage is the heart of the infrastructure of Yolla INC LTD.. It will store the private keys that are required for secure communication on the network and it will be on a specially protected site. The architecture of our system is divided into performance-critical and security-related components. Because of this, we can run specially protected operating systems with extremely high security standards in crypto storage without causing performance problems. We use strict partitioning in the crypto vault. This ensures that keys for TLS connections, cluster-to-cluster communications, and MCU, ESD storage encryption, and cryptocurrencies are stored separately from each other.

## **REMOTE MONITORING AND MAINTENANCE**

### **MONITORING OF SYSTEMS**

The enormous power of hashing in need of constant control. In the event of incidents you need to report them, as well as to record, assess and handle. Therefore, Yolla INC LTD. pays special attention to the concept of intelligent system monitoring.

### **FAULTS**

Each infrastructure component will be monitored. In the event of a component failure, it will be recognized by the upstream module that will report the failure to the MCU. Each incident will be recorded and evaluated. The higher the priority of the incident on the evaluation MCU, the higher the priority of the response to handle the error. Error handling configured and can represent a message in a complex chain of processing malfunction.

### **THRESHOLD VALUE**

In addition to state monitoring, the Cluster Control Unit and the MCU monitor important key performance indicators (KPIs) and, in certain cases, make adjustments. One example can be a decrease or increase of temperature; another example is messy change can see (the number of hash operations that the miner can perform for a certain period of time).

The moment when the correction is performed, the threshold values are determined. We plan to implement the so-called threshold management system.

Threshold values will be managed in the MCU. The thresholds are set by default, but you can change them manually if necessary. If a component parameter reaches a threshold, custom operations are automatically run. These operations can be messages sent to specific responsible parties, or interventions to the system, such as disconnections or exceptions at the network level.

### **HASHRATE**

If the hash rate reaches the threshold value, and the system of mining is responsible messages about health, there is an assumption that someone is stealing hashing power. In the worst-case scenario, an attacker could place himself/herself in the middle of a system (for example, a mediation or a man-in-the-middle attack or a component break-in). This is an unlikely situation if someone gains access to the Cluster and somehow connects to the active switch port and one of the virtual networks (VLANs) of that switch. This unlikely scenario would disable the component and exclude the corresponding components from the network. The on-site and support security escalation will also be activated.

### **TEMPERATURE**

As described in the automated cooling section, the intelligent immersion cooling system monitors and controls the temperature inside the Cluster control unit, but the temperature information is also sent to the MCU. When certain thresholds are reached, the MCU can run favorite operations, including messages to the service provider or disabling cluster components.

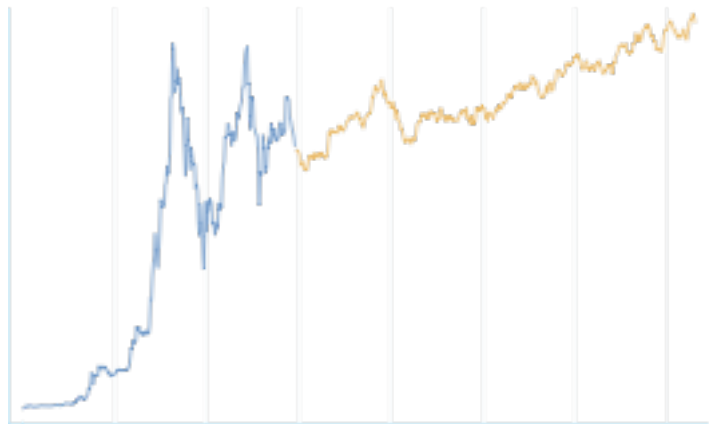
## **OPERATIONS WITH INTELLIGENT MINING**

### **SWITCHING OF COINS IS ABSOLUTELY NECESSARY FOR LONG-TERM PROFITABILITY**

In connection with the volatility of the cryptocurrency market in the company Yolla INC LTD. mechanisms were developed, implementing hedging volatility risk and provides a return on investment in the long term. The need for this once again emphasizes the development of events with the Ethereum platform, which is likely to move to the concept of proof of ownership (proof of stake) with reduced mining profitability. The upcoming hard fork in combination with the ice age can lead to the fact that it will be more profitable to mine another coin. In this aspect, the structure of Yolla INC LTD. is easily adaptable-the choice of coins for mining is carried out

automatically. For this purpose algorithms of calculation of the most favorable coin are used, or the choice is made on the basis of individual preferences.

The importance of such flexibility is emphasized by the analysis of projected difficulties in Ethereum. It becomes clear that Ethereum mining will not remain profitable in the long term, this is indicated by the projected exponential increase in mining complexity and the corresponding reduction in rewards. This is also confirmed by the so-called "complexity bomb" (difficulty bomb), which was postponed by the "Byzantine" hard fork for 42 million seconds (about 1.4 years). Assuming the average block time is 10-19 seconds, the difficulty will remain constant during this time interval. After 1.4 years, the complexity bomb will increase the complexity of ETH mining every  $10^3$  blocks, making it virtually impossible to mine new blocks. In our model, we assume that the block time is a constant value, and consider the scenario in the lower bound. Thus, with long-term mining operations, flexibility in coin selection is the most important. Complexity Ethereum increases when the hash rate increases in the network, but the difference of this model is negligible.



**Pic. 22.** The estimate exchange rate USD/EUR. Based on the Ornstein-Uhlenbeck process.

An approximate forecast for the ETH/USD rate is shown. The US shows that there is considerable volatility. Together with the historical Ethereum price data, we used the Ornstein–Uhlenbeck process to model the Ethereum price in the future. This process was proposed by Ornstein and Uhlenbeck in 1930 and is an adaptation of Brownian motion, used to simulate the motion of a free particle in a liquid and first developed by Albert Einstein. It satisfies the stochastic differential equation,

$$dX(t) = \theta(\mu - X(t)) dt + \sigma dB(t)$$

where  $B(t)$  — standard Brownian motion,  $\theta > 0$  the rate of return on average,  $\mu$  equilibrium level and  $\sigma > 0$  the mean value of random fluctuations modeled as Brownian motion. This approach yields the following predictions for the graph of the price of

ETH/USD (which, of course, are not taken into account external factors and is therefore not binding).

As mentioned earlier, there are several factors to consider when choosing a coin for mining. There may be periods when Ethereum will indisputably become the most profitable coin, whereas in other periods This decision will have to be changed on a daily basis.

### **APP TO SWITCH COINS**

Our cluster management units are capable of mining using all the most common algorithms (working systems based on GPU or ASIC). Examples of algorithms that can use our clusters serve Ethash, CryptoNight and Equihash and important algorithm Blake, allowing to simultaneously carry out the exploitation of two coins. Using each of these mining algorithms, it is possible to mine different coins, this provides extreme flexibility in choosing the coin that we can mine at any time. In addition, our algorithms track the performance of each mining algorithm to determine the profit from mining of all available coins and the value of their mining in terms of rewards. If our real-time analysis indicates that it is more profitable to mine another coin, the MCU can automatically send a command to the Control Unit to mine the most profitable coin without operator intervention. This allows us to react quickly to the market and ensures our independence from the only option of mining, the best at the moment.

### **DOUBLE MINING**

Yolla INC LTD. provides dual mining in a Prime setting. Double mining means that two coins are mining on the same hardware component, using its computing power and memory. Double extraction is often considered as unprofitable, because it greatly increases power consumption. Due to the highly adaptable structure of Clusters, Yolla INC LTD.. it is not tied to the usual levels of energy prices for households or industrial enterprises, so it can offer double production in a profitable and stable environment that will further improve efficiency. Of course, double mining can be enabled or disabled on demand, in line with our goal of achieving high adaptability and flexibility for all mining operations and thus the unique economic feasibility of selling Yolla INC LTD. products.

## APPENDIX 1

### Key Cluster parameters description

Indicators per cluster

Quantity of miners	Price, eur	Power intake	Productivity per MONTH	
			BTC	EUR
36	92770	52,56	1,22343	11010,87

### Distribution of generated tokens between project members

Beneficial owners category	Share of mining distributable profit	Token istribution at emission	ETH	EUR
Bounty program	3%	150 000		
Founders	10%	500 000	200	100 000
Reserve tokens (Yolla INC LTD.)	5%	250 000		
Token holders	82%	3 416 667	3 417	1 708 333
bonuses , allocated at PRE-ICO		683 333		
Total	100%	5 000 000	3 617	1 808 333

### Cluster fixed operational costs, EUR/year

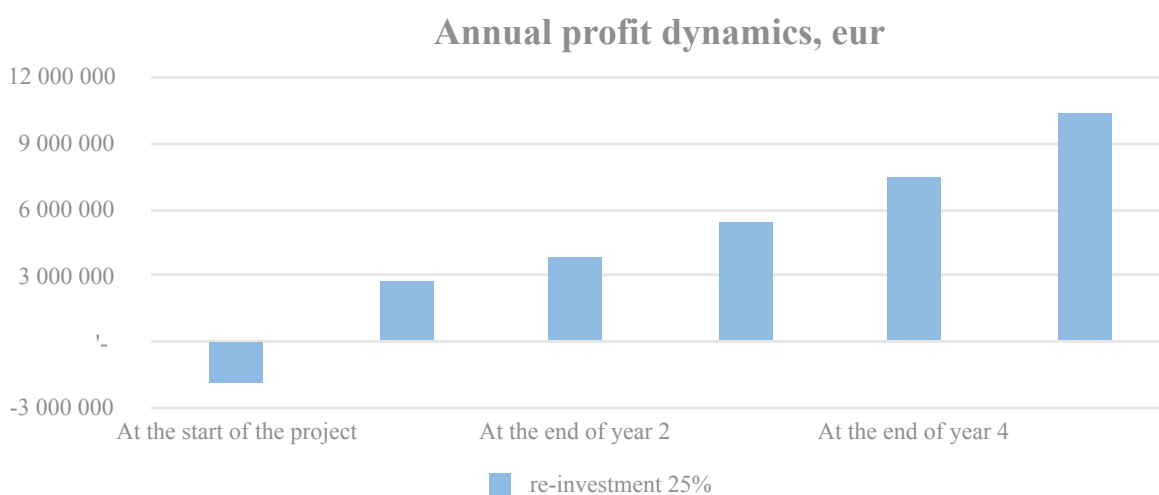
Clusters land lease, EUR/year	900
Equipment replacement to ensure continuous mining operations of Yolla INC LTD. (for production stability and MCU claculations)	2783,1
Total	3683,1
Overhead and other expenses per cluster, EUR/year	23

### ICO investment allocation

Allotment	Shares	ETH	EUR
Investments into autonomus mining clusters of Solar Mining Clusters	91%	3 109	1 554 583
Research, development and administration	9%	308	153 750
Total	100%	3 417	1 708 333

## Key performance indicators of the project (re-investment 25%)

Period	Number of clusters	Occupied area, hectares	Number of miners	Number of panels	Annual profit
At the start of the project	18	0,10	648	63	- 1 808 333
At the end of year 1	24	0,13	864	84	2 715 248
At the end of year 2	34	0,18	1 224	119	3 816 030
At the end of year 3	47	0,26	1 692	165	5 357 125
At the end of year 4	65	0,35	2 340	228	7 415 588
At the end of year 5	91	0,49	3 276	319	10 365 683



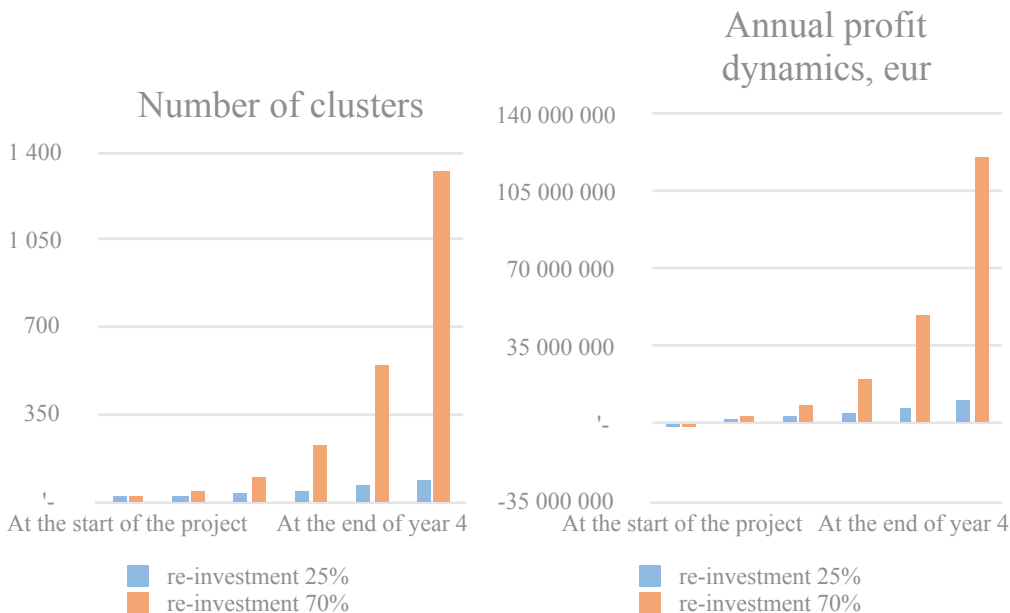


Indicators of the project (re-investment 25%)	Value (based on 5 years)
PO dividends, EUR equivalent, based on 5 years	22 252 256
EBITD, EUR equivalent, based on 5 years	25 416 695
EBITDA, EUR equivalent, based on 5 years	29 669 675
Payback time, months	11
ROI according to results of 5 years	1231%
IRR	186%
NPV for $r=10\%$ , EUR equivalent, based on 5 years	19 339 926
NPV for $r=20\%$ , EUR equivalent, based on 5 years	13 946 509

### Comparing two different re-investment strategies

**When dividends reduce to 30% - 2 times profit increase as a result of 5 years!!!**

Comparing of Key performance indicators of the project for 25% re-investment and 70% reinvestment follows



## Key performance indicators of the project (re-investment 70%)

Period	Number of clusters	Occupied area, hectares	Number of miners	Number of panels	Annual profit, eur
At the start of the project	18	0,10	648	63	1 808 333
At the end of year 1	38	0,21	1 368	133	3 430 757
At the end of year 2	92	0,50	3 312	322	8 362 260
At the end of year 3	224	1,22	8 064	784	20 349 776
At the end of year 4	544	2,95	19 584	1 904	49 432 437
At the end of year 5	1 324	5,03	47 664	4 634	120 179 696

Indicators of the project (re-investment 70%)	Value (based on 5 years)
PO dividends, EUR equivalent, based on 5 years	60 526 478
EBITD, EUR equivalent, based on 5 years	172 894 568
EBITDA, EUR equivalent, based on 5 years	201 754 925
Payback time, months	17
ROI according to results of 5 years	3347%
IRR	321%
NPV for r=10%, EUR equivalent, based on 5 years	131 895 738
NPV for r=20%, EUR equivalent, based on 5 years	90 770 716

CAPEX for re-investment 25%:

Year	Days	Number of classes	Capital Expenses				Depreciation				Residual Value			
			43200		17800		1770		10000					
			Minutes	Panels	Accumulator Units	Tasks	Minutes	Panels	Accumulator Units	Tasks	Minutes	Panels	Accumulator Units	Tasks
Year 1	11	777 600	480 400	31 860	110 000	177 840	177 840	12 144	20 983	599 760	532 160	19 716	159 417	
Year 2	23	1 336 800	907 200	42 480	210 000	249 840	249 840	17 088	28 917	1 186 720	1 159 420	45 335	370 500	
Year 3	31	1 468 800	1 185 200	55 580	310 000	350 640	350 640	26 380	40 983	2 504 880	2 094 480	110 730	669 917	
Year 4	41	2 230 400	1 776 800	97 350	470 000	485 280	485 280	31 320	56 167	4 050 000	3 385 000	172 129	1 083 750	
Year 5	61	2 804 000	2 137 000	136 290	610 000	578 240	578 240	46 609	78 500	6 179 760	5 154 580	289 010	1 685 280	
<b>Total</b>		<b>8 121 600</b>	<b>7 106 600</b>	<b>493 560</b>	<b>1 890 000</b>	<b>1 841 840</b>	<b>1 841 840</b>	<b>141 550</b>	<b>224 750</b>				<b>11 298 990</b>	
					<b>17 811 860</b>				<b>1 252 900</b>					

CAPEX for re-investment 70%:

Year	Days	Number of classes	Capital Expenses				Depreciation				Residual Value			
			43200		17800		1770		10000					
			Minutes	Panels	Accumulator Units	Tasks	Minutes	Panels	Accumulator Units	Tasks	Minutes	Panels	Accumulator Units	Tasks
Year 1	11	777 600	480 400	31 860	110 000	224 640	224 640	13 140	20 990	232 800	412 760	18 220	134 000	
Year 2	23	1 641 600	1 430 400	47 160	380 000	547 280	547 280	37 167	63 133	1 647 600	1 344 960	46 413	470 667	
Year 3	32	1 974 400	1 477 600	265 120	920 000	1 231 280	1 231 280	97 793	154 983	4 290 480	1 461 280	151 941	1 256 183	
Year 4	424	1 676 800	9 467 200	418 430	2 240 000	3 230 520	3 230 520	329 482	374 158	10 133 760	1 724 960	381 959	3 132 133	
Year 5	144	21 500 800	20 563 200	1 112 130	5 440 000	7 064 960	7 064 960	557 147	999 133	16 179 600	21 417 280	934 648	7 692 888	
<b>Total</b>		<b>27 671 200</b>	<b>24 624 800</b>	<b>1 876 100</b>	<b>9 160 000</b>	<b>12 197 680</b>	<b>12 197 680</b>	<b>997 168</b>	<b>1 627 198</b>				<b>26 271 143</b>	
					<b>8623 700</b>				<b>18 960 168</b>					