# Whitepaper



science, not fiction

Version 1.2

## Changelog

#### Version 1.2

- correction of minor spelling mistakes
- added new advisors
- few changes in roadmap

#### Version 1.1

- correction of minor spelling mistakes
- added information about apendix A, Legal Status of TecraCoin
- change of blocks rewards distribution

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## Legal Clause

#### 1.1 LEGAL RESERVATIONS

The information presented in this document may not be exhaustive of the issues raised in it and does not imply elements of establishing any contractual relationship. The only purpose of this paper is to provide relevant information to potential coin holders in order to enable them to determine whether they want to undertake a detailed analysis of the company due to their interest in acquiring TecraCoins. This White Paper does not constitute the solicitation of an offer to sell nor an offer to purchase securities in any jurisdiction, where such offers or solicitations are unlawful.

Although TecraCoin is not a security and their owners are not share-holders, in the event that this coin will be classified as a security, it may be subject to certain restrictions imposed by US or Canadian securities legislation or securities legislation applicable in other countries.

logotype with claim



monohromatic version black version

## TECRA COIN

## TECRACOIN

colors

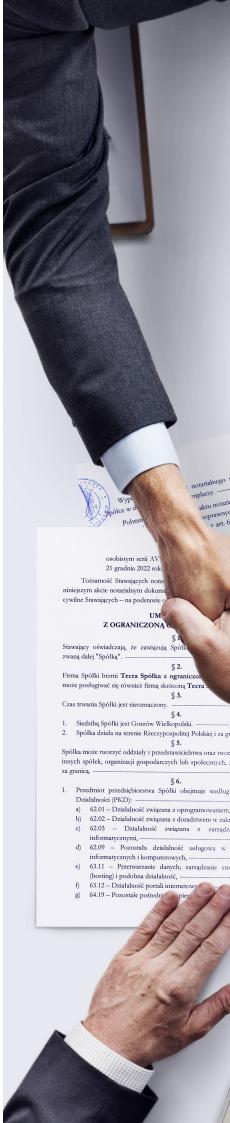


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#### 1.2 TECRA LTD.

TecraCoin refers to a company operating under the name Tecra Ltd. registered in Poland at: Gorzów Wielkopolski, ul. Walczaka 112, NIP (tax identification number) - 599 323 5626 KRS (company registration number) - 0000752946

This White Paper is an information document presenting TecraCoin plans for the development of Tecra Investments in the future. TecraCoin reserves the right to change these plans or refrain from implementing them at its sole discretion. The White Paper has not been prepared in accordance with any legal or regulatory acts and is not subject to any legal or regulatory act in any jurisdiction to protect investors.

This document may contain "forward-looking statements" - that is, declarations related to events in the future. These declarations often refer to the future business and organizational plans of TecraCoin and often include words such as "expect", "intend", "plan", "will", "would", "estimate", "forecast" or "aiming". These declarations, by nature, relate to issues that are uncertain to a varying extent. TecraCoin can not guarantee that any forward-looking declarations, historical data or experiments carried out by the company or the expected results of the TecraCoin will be associated with actual facts or results in the future. Tecra Coins are not shares or any kind of securities. They do not entitle to ownership or any participation in Tecra Ltd. company or any other proprietary rights. They are only a means that can authorize investors to use it to acquire services provided by Tecra Ltd.

The purchase of Tecra Coins should only be undertaken by persons or entities with significant experience and understanding of the use and complexity of cryptocurrencies and software systems based on blockchain technology. If you do not have the required experience or expertise, you should not acquire Tecra Coins or participate in this ICO. The participation in an ICO is generally considered to be burdened with such significant risks as loss of funds invested, including cryptocurrency, tax liabilities and other legal sanctions resulting from the law of individual jurisdictions. Before proceeding to this ICO, carefully read this document. Acting with the due diligence required from a professional, you should carefully consider the risks, costs and other negative aspects if necessary and obtain independent opinions in this matter.

#### 1.3 AML & KYC

Tecra Ltd. will cooperate with all state authorities as well as with all authorized financial institutions and will strictly adhere to all applicable AML (Anti-Money Laundering) and KYC (Know Your Client) and other banking or governmental laws and regulations.

TecraCoin ICO complies with these rules and restricts access for US citizens, Green Card Holders and US residents to the 'accredited investors' category, pursuant to Provision D, Rule 506 (5) of the US Security Act. Certain statements, estimations and financial information contained herein are forward-looking statements or for information purposes only. Such statements or information relate to known and unknown risk factors and uncertainties, which may cause actual events or results that differ materially from estimates, implied results or expressed in such projections.

The English version of this White Paper is a basic and official source of information about the TECRACOIN platform. All information contained herein can be always translated into other languages. It can also be used for written or verbal communication with existing or future members of the community, partners etc. Due to translation or transmission of such information, part of the contents of this document may be lost, their integrity may be compromised or the content may be misinterpreted. The accuracy of such alternative ways of exchanging messages cannot be guaranteed. If there are any inconsistencies or contradictions between the translation or communication and this White Paper, the provisions of the original document in English will prevail.

## The Idea

"Any sufficiently advanced technology is indistinguishable from magic."

Arthur C. Clarke



### Welcome to the Tecra investment space!

Technology improves the world and does it constantly. Our goal is to streamline this irreversible process and mark our role in transforming the civilization. As the Tecra team, we have created an Internet platform for raising capital that will support the commercialization of high end technologies protected by patents. By using a Blockchain-based distributed ledger, we can guarantee the transparency of the investments based on TecraCoin.

## Our idea unites three groups of clients:



### Scientists

paraphrasing A. Clarke, the world of magic and technology, that is the world of **scientists** 



### Investors

the world of business and capital, a place where **investors** learn patent-protected technology and commercialize its value in useful and prospective companies,



## Community

the community of miners.
Thanks to their work, their computing power and many hours of discussions about Blockchain, we can now develop Satoshi Nakamoto's vision into the PoW model.

The Tecra team participates in spreading the idea of Blockchain. It connects interested groups into one promising project..

Imagine a place where every enlightened patent-based thought can be implemented and made available to consumers. A place where scientists hidden in their scientific labs or garages can openly present their ideas and the community built around the Tecra project will vote on which technologies should be financed. Technologies that can actually change the world.

Maybe we will live to see the day when a cure for cancer, engines consuming the minimum amount of fuel or stellar modules accelerating the flight to Mars, will appear on this platform. From the present day perspective it seems to be irrational, however is this 'irrationality' not a driving force for progress?

In the history of humanity there have always been examples which seemed impossible, until the pioneers of science discovered uncharted worlds and technologies which could move the barriers of "ridiculousness" to the next level. Especially when in 1909 Nikola Tesla said for New York Times:

"It will soon be possible, for instance, for a business man in New York to dictate instructions and have them appear instantly in type in London or elsewhere. He will be able to call up from his desk and talk with any telephone subscriber in the world.

It will only be necessary to carry an inexpensive instrument not bigger than a watch, which will enable its bearer to hear anywhere on sea or land for distances of thousands of miles.

One may listen or transmit speech or song to the uttermost parts of the world."

Nikola Tesla

Hardly anyone took this words seriously. Today we know that irrationalism is the basis for science. Paraphrasing Karl Popper's words, if something is scientific it is refutable. Tecra wants to disprove stagnant paradigms and create new ones.

Tecra is an idea that will connect an intellectual flower with an affluent and well thought-out investment process. Although, we start with Graphene, our leading idea is to create the incubator of geniuses who will say in many years: Thank you Tecra. Indeed, it was science, not fiction.

## Problems of the World

Due to the immaturity of the market associated with the Graphene technology, there is a gap between theoretical application and commercial implementation. This means that the majority of Graphene-based technologies are still at the research stage, which raises legitimate concerns among investors. Another opportunity is the lack of standardization and the specified quality of Graphene. This technology is currently in the second phase:

- a) Invention of Graphene,
- b) Development of Graphene to an application form,
- c) Graphene implementation and commercialization.





The Tecra Investment team debated these issues with the global industry leaders at GrapChina 2018 in China. Together with: Professor Francesco Bonaccorso from the IIT Central Research Lab Genova, Professor Stephen Roch from the Catalan Institute of Nanosciences and Nanotechnology-ICN2 and the Barcelona Institute of Science and Technology, Dr. Norbert Fabricius from Karlsruhe Institute of Technology, Professor Vladimir Falko - Director of Graphene NOWNANO Centre for Doctoral Training from the University of Manchester, Professor Joshua Robinson from Pennsylvania State University, Professor Andrea C. Ferrari from the University of Cambridge, Murni Ali - Vice President of National Graphene Action Plan 2020, Professor Dr. Xinliang Feng from the Max Planck Institute, Professor Jinbo Bai from the French National Research Center, professor Dusan Losic Dusan from the School of Chemical Engineering within the University of Adelaide and Director of the Australian Research Council (ARC) Graphene Hub for Graphene Enabled Industry Transformation, Professor Johan Liu from the Chalmers University of Technology, Professor Sumio Iljima from the University of Basel, Professor Emmanuel Kymakis from the University of Cambridge, Professor Feiyu Kang from Tsinghua University, Dr. Di Wei from Nokia Research Center, Dr. Mingyang Lu from the Jackson Laboratory, we recognized that the gap between the research world and market reality is still too large. Therefore, we sent a letter to researchers, entrepreneurs and investors in this space around the world to begin to bridge this gap between science and business. The content of this letter is as follows:

"1500 years ago, in the east of the world, there was great city, called Chang'an. A route starting from here, passing through Asia and West Asia, westwards to the Mediterranean Sea, opened the door to friendly contacts between China and other countries, as well as the Silk Road linking east and west, Asia and Europe.

We are scientists and entrepreneurs from academia and industry involved in research and development of graphene and related materials. Today, under the radiance of the ancient "Silk Road", we gathered in Xi'an (Chang'an'), to attend the 2018 China International Graphene Innovation Conference (GRAPCHINA 2018), and discuss global cooperation opportunities on technology and industrialization of graphene and related materials.

We believe that with the combined efforts of scientists, entrepreneurs and policy makers, graphene innovation achievements will bring new development opportunities in the field of energy, environment, life science, and information technology. The graphene industry may become a new growth point in the development of high-tech industries.

Hence, we call all scientist, entrepreneurs and related stakeholders to strengthen the cooperation on standardization, intellectual property management and commercialization, so to establish a development community for global graphene and related materials industry."

Being aware of the global problems in the high end technology world, makes the benefit of the TecraCoin Investment Fund visible. Today there already is a small investment market for graphene which is primarily filled by large companies with a small graphene segment in their portfolio (production of goods using graphene). The majority of the potential (and also the risk) lies in those companies focusing primarily on graphene. According to Prof. Ferrari and other graphene experts almost 90–95% of the graphene focused companies are going bankrupt. This is driven by the large gap between the scientific and business worlds, since scientists invest into research and not business development. The Tecra Investment Fund and Tecracoin bridge this gap with investment transparency through Blockchain and together with the specialists in the industry ensure financial security for the future.



Blockchain also solves the issue of raising private capital. Unlike the institutional capital that can only be used for research, the private investors' money will be used to commercialize technology and thus create profitable future companies.

TecraCoin solves investors' problems. By choosing the right business partner, we offer a safe investment in the high end technology market, the value of which over several years will exceed the capitalization of hundreds of billions of dollars (the current valuation is around 30 million dollars). In the next few years, only several dozen companies will remain

on the market with the capital reaching Google or Facebook. One of these companies will be Tecra. The Tecra investment platform aims to meet global problems and connect the following groups into a coherent investment fund:

#### 3.1 SCIENTISTS PROBLEMS

- restricted access to capital for the commercialization of patents
- a long legal process from the start of research to commercialization
- lack of technology standardization as well as a consistent quality policy





#### 3.2 INVESTORS PROBLEMS

- limited trust to the world of science and new technologies
- a long legislation process from the start of research to commercialization
- lack of space for safe investment in high end technologies

# 3.3 BLOCKCHAIN COMMUNITY PROBLEMS

- a large number of cryptocurrencies that don't give any real benefits
- a small selection of promising projects based on PoW consensus
- lack of Blockchain-based projects with access to a real business



## Our Solution

TecraCoin offers solutions on several levels:

#### 4.1 THE SOLUTION FOR SCIENCE

- Through the creation of a transparent system of capital movement based on Tecra Blockchain and using TecraCoin currency, we will provide our investors with the most promising projects.
- Tecra offers access to the most experienced lawyers and specialists from, among others, the Kostrzyn Slubice Special Economic Zone, who have invested hundreds of millions of zloty, in companies such as Zalando or BMW. Thanks to their experience and trust of our investors, we will accelerate the process of the project implementation.
- We will create a website platform where scientists will be able to submit their ideas. After being verified by the Tecra scientific team and taking into consideration the community voting, all prospective projects will be directed to commercialization.





#### 4.2 THE SOLUTION FOR INVESTORS

- The Tecra team are specialists in their industry. Due to our wealth of experience in the field of investments and extensive business contacts, each Tecra technology project receives a guarantee of its usefulness and future profits in business.
- Using Blockchain technology, Tecra Coin will create a friendly place for investors. Without the need for long and complicated legal consultations.
- Blockchain is an open ledger. Tecra ensures that the investment capital movement and implementation processes will be verifiable at every stage, e.g. through the client's panel on the website.

# 4.3 THE SOLUTION FOR THE COMMUNITY

- The biggesr advantage of TecraCoin is the possibility of active support the companies producing real produscts (e.g. Graphene).
- Blockchain is a community. We are close to the idea of Satoshi Nakamoto, that is a distributed ledger. Therefore, PoW is not only a bow towards miners but also towards a fair distribution.
- TecraCoin is one of the few cryptocurrencies based on PoW, behind which there is a viable business (planned implementation of Graphene factories and development of Graphene technologies as well as medical technologies in the future).





The way the Tecra investment fund works is as follows:

- By purchasing TecraCoin cryptocurrency, investors give us funds for technological projects prepared to be commercialized,
- TecraCoin scientists and business experts select the most promising projects and ask the Tecra community to vote,
- Voting is done via portfolios and the selected project receives funds for implementation,
- Tecra Ltd. establishes a special purpose vehicle with a selected project and commercializes this project,
- after the investment is realized, Tecra receives lifetime profits of the promoted project,
- investors with TecraCoins can sell them on the stock exchange or lock-up them under so called crypto-deposit for the specified duration of time and receive the cryptointerest for the return; entities interested in technologies (such as Graphene) developed by the Tecra company, can purchase these using TecraCoins with favorable conditions,



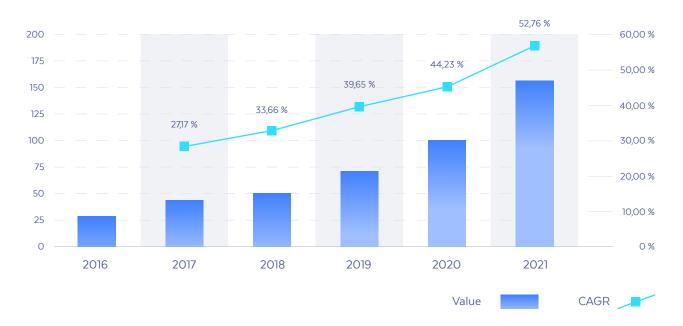
- the Tecra company is committed to periodically purchase TecraCoins from the market allocating the 30%-70% of its profits (if any). The pruchase price is to be market price.
- for the subsequent project, Tecra then releases another TCR as part of ICO and will collects funds for the new project.

A detailed description of the investment process can be found in apendix A (download on www. tecracoin.io: TecraCoin Legal Status.

## Graphene Market Analysis

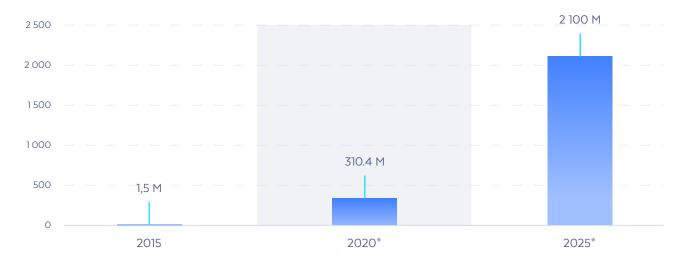
According to Technavio analytical agency, the value of the global graphene market is currently estimated at 50.41 million dollars (end of 2017) and an average annual increase in this value is expected with CAGR of 39.22 percent up to 153.81 million dollars in 2021.

#### The value of the global graphene market in 2016-2021



The global graphene market is expected to grow at a rapid rate over the forecasted period due to the growing demand from research institutions for discovering new uses of graphene, as well as due to its widespread commercial and industrial applications. Technavio analysts indicate that the market is currently in the early stages of growth – research on new graphene applications is underway and its first commercial applications are being implemented. According to Statista.com reports, the market for graphene will reach USD 2.1 billion by 2025.

#### Graphene market value in million U.S. dollars



<sup>\*</sup> This statistic shows the market value of graphene-based products worldwide in 2015, with projected figures for 2020 and 2025. In 2015, the global market value of graphene-based products was 1.5 million U.S. dollars, and it is projected to increase to 2.1 billion U.S. dollars in 2025.

IDTechEx Research predicts, however, that the graphene market will grow to over \$ 300 million in 2027, this forecast refers to graphene at the material level and does not take into account the value of the market for graphene products. The increase in revenues of graphene enterprises will be accompanied by a drop in average sales prices of this material, and in 2027 the sales volume is to reach the level above 3.8 thousand tons per year.

However, the IDTechEx forecasts suggest that the graphene industry will remain in excess of production capacity by 2021, while the capacity increase is expected to take place in the next forecast period. In addition, IDTechEx Research indicates that approximately 90% of market value in 2027 will be generated by graphene nanoplates (in relation to graphene sheets).

The graphene market will be divided into many applications in the following years, reflecting the various graphene properties. IDTechEx analysts expect that the fastest on the market will be functional graphene paints and coatings - this is a trend that the agency predicted a few years ago and is observable in currently developed prototypes and small-scale applications.

At the moment, IDTechEx Research predicts that by 2018, the market for functional inks and coatings will account for 21% of the market. On the other hand, energy storage and composites sectors are to develop the most, covering respectively 25% and 40% of the graphene market in 2027.

#### 5.1 PRICES OF GRAPHENE

IDTechEx predicts that the price split will be narrowing as the industry moves from selling graphene to R&D for sale to commercial applications. The fork will not close completely, however, because graphene will remain a specialist material, and differences in the types of graphene utilized will be reflected in its price.

For example, the current price of 50x50 monolayer fine graphene film in the Graphene Square store is \$ 819 for graphene on polyethylene terephthalate film and \$ 263 for copper foil.

Graphene nanoplates (5-8 nm thick) are sold at prices from 219 to 229 dollars per kilogram, compared to the price of 3 dollars per kilogram of silicon (0.38 mm thickness).

Researchers at the University of Glasgow used copper foil as a substrate to create high quality graphene with a very smooth copper surface. Copper is used in this process, available for sale and costs about \$1 per square meter, compared to the price of \$115 per square meter of copper, which is currently used in the production of graphene.

## Bulk order Monolayer CVD Graphene price (€/cm²)



Source: www.graphenea.com/pages/graphene-price#.W9M7Z3r-7RmB

#### 5.1 MARKET DISTRIBUTION

As Technavio points out, it is expected that during the forecasted period semiconductors, electronics and optoelectronics will become the main direction of graphene applications development. Subsequently, important target segments are to be energy, aerospace and defense engineering, composites, coatings, inks and paints as well as automotive. Market segmentation due to the type of end user has been depicted in the below figure.

#### Target segments of the graphene market

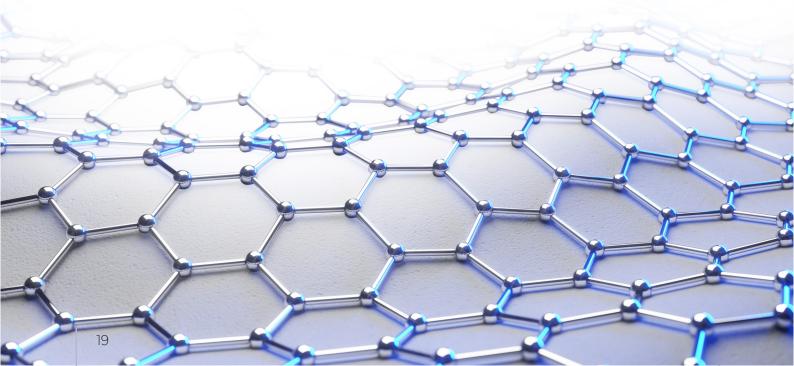


Source: Tehnavio

Graphene composites are used in many industries, including the aviation industry for the production of light aircraft weighing approximately 3,700 kilograms. According to Technavio experts, one of the first applications of graphene composites will be the development of an electrically conductive epoxy resin, with particular emphasis on increasing the electrical conductivity of composite materials used to manufacture aircraft fuels to the extent that the use of copper mesh, used to prevent damage caused by lightning strikes, will no longer be required. The National Laboratory at Oak Ridge has developed a composite of plastic and a 25-cm graphene sheet that meets the researchers' expectations in terms of electrical and mechanical properties. The use of CVD technology for the production of large graphene sheets eliminates the risk of graphene flaking, thus affecting the strength and flexibility of composites, and causes a 50-fold reduction in the graphene requirement in the composite.

China is a leader in patent applications of graphene-based products as well as the main source of graphite, hence they are the most important competitor on the market. They play a dominant role due to industrial cooperation and research and development activities conducted by this country, focusing intensively on the commercialization of graphene. In terms of value, in 2016, the graphene market in China experienced a threefold increase compared to 2015. This increase was caused by the growing acceptance of graphene in industrial applications, including anti-corrosion coatings, touch screens and lithium-ion batteries. Technavio indicates that governments and public organizations in developed countries are following the trend of investing in research and development of graphene. Here are some examples of public and private investments:

- Financing from the British Government in 2016 in the amount of USD 353 million intended for graphene centers;
- In 2016, the European Union invested USD 1.3 billion in the Graphene Flagship consortium;
- EverPower, a New York-based investment company, proposed Haydale Graphene Industries investments in the amount of USD 4.15 million.
- Versarien, an engineering services company, spearheads a majority stake in Cambridge Graphene (spin-out of Cambridge University), a company known for developing graphene inks and related materials. Thanks to this acquisition, Versarien gained a central position on the market for the development of graphene in the United Kingdom.



## Technology

#### 6.1 WHAT IS GRAPHENE?

Graphene is the strongest and thinnest material known to man. Consisting of a single sheet of carbon atoms one atom thick, it has mechanical properties that are superior to those of steel or any other material. Its tensile strength is approximately 20 times higher and its modulus of elasticity is double that of carbon fibre, a material generally considered to be among the most revolutionary materials for industrial use.

#### 6.2 TECRA PATENTED TECHNOLOGY

The following lists some applications based on Graphene Technology which we can commercialize. We have acquired agreement from the Polish Science Academy and Polish government. These technologies are the first of many we have in our portfolio. Details can also be found on our published Nature article.

#### 6.2.1 LASER-INDUCED WHITE LIGHT EMISSION FROM GRAPHENE CERAMICS

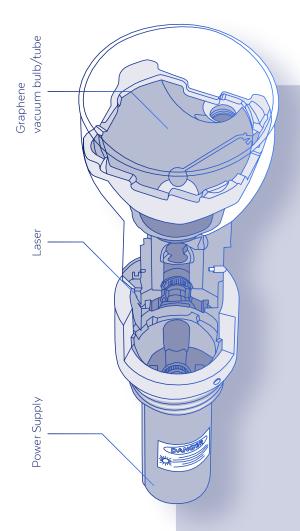
"Recent theoretical and experimental studies have indicated the existence of a new stable phase of carbon with mixed sp2 and sp3 hybridized bonds—diaphite. Such a two-layered structure with sp2/sp3 bonds may be observed after the photostimulation of highly oriented pyrolytic graphene with femtosecond laser pulses. This hidden... "

The whole article is available at the link below: www.nature.com/articles/lsa201510

## 6.2.2 LASER INDUCED WHITE LIGHTING OF GRAPHENE FOAM

"Laser induced white light emission was observed from porous graphene foam irradiated with a focused continuous wave beam of the infrared laser diode. It was found that the intensity of the emission increases exponentially with increasing laser power density, having a saturation level at ca. 1.5 W and being characterized by stable emission conditions. It was also observed that..."

The whole article is available at the link below: www.nature.com/articles/srep41281



### 6.3 LIST OF OUR PATENTS:

Below an listing of the most relevant patents we have in the space. Further filings are planned.

Lp.	Title & Patent number	Date of filling	Creators	Brief
1.	Lighting device and a way to generate white light with high power 423185	17.10.2017	Wiesław Strek, Robert Tomala, Mikołaj Łukaszewicz	The object of the invention is to provide a lighting device comprising a suitably prepared graphene matrix and a structure to prevent the effects of possible plasma phenomena after the matrix is excited.
2.	Stable graphene-silica composites and the method of their preparation 422455	04.08.2017	Wiesław Strek, Dariusz Hreniak, Anna Łukowiak, Anna Wedzynska, Yuriy Gerasymchuk	The subject of the invention is a stable graphene-silica composite based on expanded graphite oxide and silica or silica xerogel, characterized in that it is a system consisting of flakes of graphene and silica, where each graphene flake is less than 2 µm. The subject of the invention is also a method of obtaining these composites.
3.	The method of producing an expanded graphene structure intercalated with nanoparticles of metal in the form of a powder or foam  422453	04.08.2017	Wiesław Stek, Dariusz Hreniak, Anna Łukowiak, Anna Wedzynska, Yuriy Gerasymchuk	The subject of the invention is a method of producing an expanded graphene structure intercalated with metal particles, where Brodie oxidised graphite is used as the substrate, which is reacted with a colloidal solution of nanometric metal particles or with a metal salt solution, where the metal ions are subjected to reduction under mild conditions, a partially reduced particle bed intercalated with graphite oxide metal nanoparticles is further heat-treated to form the final product in powder or foam form. Preferably, the nanosized inclusions of metallic particles include iron, cobalt, nickel, silver or gold.
4.	A source of white light and a way to generate white light 414821/PL229151	16.11.2015	Łukasz Marciniak. Wiesław Strek, Dariusz Hreniak, Robert Tomala, Bartłomiej Cichy, Yuriy Gerasymchuk	The subject of the invention is a white light source composed of a vacuum glass chamber containing an optically active element, an electromagnetic radiation generator of IR radiation provided with a laser IR diode, a power supply, a focusing lens and optionally a reflector characterized in that the optically active element placed in the vacuum chamber is thin-film graphene matrix up to 3mm thick. The object of the invention is also a method of generating white light by means of said white light source.

#### 6.4 EXAMPLES OF GRAPHENE APPLICATIONS

#### 6.4.1 GRAPHENE MOTORBIKE HELMET

#### STRENGTH:

graphene distributes the impact force better than any other material. This allows the production of a more durable helmet, improving the safety.

#### PERFORMANCE:

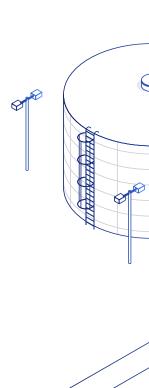
The impact resistance is guaranteed even in extreme conditions of environmental heating.

#### COMFORT:

graphene due to its high conductivity allows a reduction of internal heat and improves thermal comfort.

The Graphene due to the material's particular properties, it is able to distribute the force of an impact better than any other material. It is also an excellent conductor of heat. The helmet's thermoregulatory outer shell allows the wearer to feel comfortable even during direct exposure to the sun.

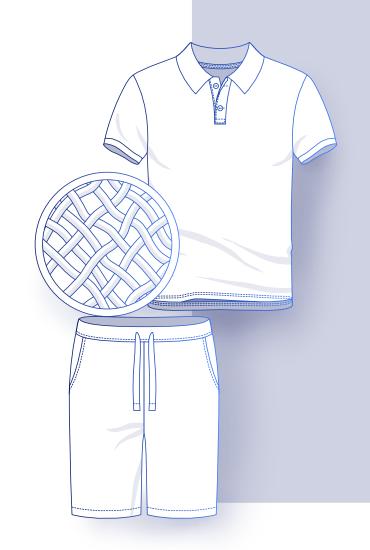




#### 6.4.2 GRAPHENE POLYIMIDE FIBER

Graphene-polyimide fiber can bring new product innovation and upgrade to the traditional polyimide fiber industry. In addition to its excellent mechanical properties such as high strength, high modulus and wear-resistance, graphene polyamide fiber also possesses properties such as UV resistance, antibacterial, anti-mites, far infrared health care, etc. As a result, it considered a high-end "all purpose" fiber that the polyimide industry players are competing to develop.

Graphene-polyimide fiber can have wide applications in clothing, home textiles, fishery and many other industries due to its UV resistant, antibacterial, antistatic and flame retardant properties.



## 6.4.3 GRAPHENE WATER UI TRAFII TRATION MEMBRANE

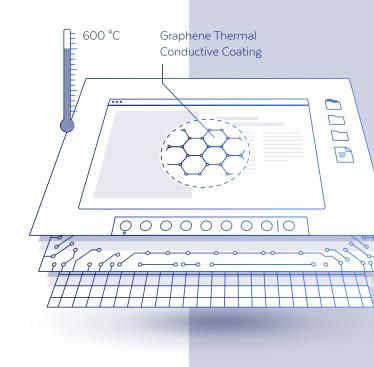
Ultrafiltration membrane (wastewater treatment, municipal water supply, seawater desalination). It is a membrane which relies on the pressure difference on both sides of the membrane and the tiny pores on the membrane to allow water and other small molecules to pass through in the "permeate", while suspended solids and solutes of high molecular weight are left in the "retentate". Its effect is directly related to the size of the pores.

Application fields: chemical, textiles, industrial sewage treatment and reuse, water supply and municipal sewage treatment, seawater desalination pretreatment, paper making, coal and other industries.

## 6.4.4 GRAPHENE THERMAL CONDUCTIVE COATING

This type of heat dissipation coating is mainly applied to the surface of heat sinks widely used in electronic appliances including desktops, laptops and others. When applied correctly, the coating can significantly enhance the performance of heat sinks and possesses the properties of high temperature endurance (600°C), low curing point (80-100°C) and good scratch-resistance.

Graphene is know to possess very high thermal conductivity. By mixing well-dispersed graphene powder into base coating, the thermal property of the coating can be significantly increased.



## Our Offer & Products

We offer participation in the Tecra investment fund, which through the release and purchase of TecraCoins (cryptocurrency) built on the lyra2z hash algorithm and based on Zcoin and Bitcoin, enables investing into the development of highend patent-based technologies and then their commercialization. You can buy them using our ICO system that is divided into several stages:

Private sale for investors

minimum entry of USD 25 000 at TCR for USD 0.75 per unit.

### Public sale

TCR for USD 2.0 per unit in initial phase. Another phase in ICO tiers.



### 7.1 OUR GRAPHENE APPLICA-TIONS

The raised funds will be used to implement and commercialize the technologies that are secured by our worldwide patents:

#### 7.1.1 PRODUCTION OF GRAPHENE

Tecra Ltd. in cooperation with INTiBS (Institute of Low Temperature and Structure Research) specializes in the production of a wide range of graphene materials, such as graphene flakes, graphene oxide and three-dimensional forms of graphene in the form of graphene foam. Optimized production processes of these materials allow to control the properties of produced materials, such as the number of graphene layers, which has a direct effect on its physical properties - electrical or thermal conductivity.

Graphene graphene and its derivatives, through a number of features such as: hydrophobicity, barrier properties, biocidal properties, thermal and electrical conductivity, or an increase in sliding properties can

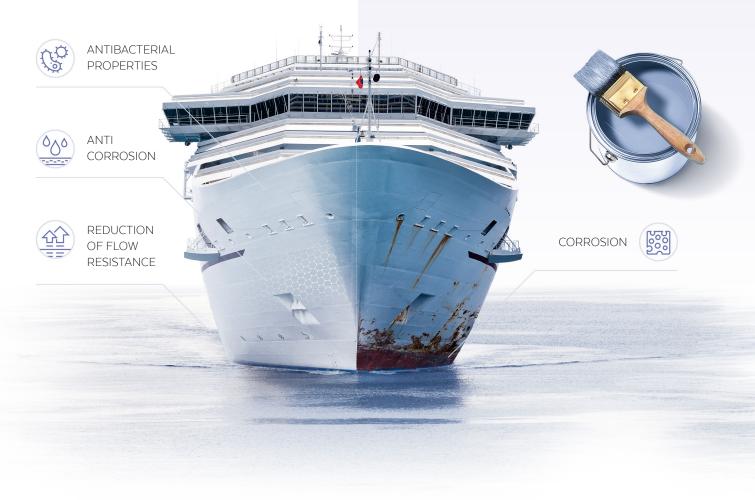


be used as an additive to paints and varnishes. The key industries for this type of graphene will be premium automotive products, shipbuilding and special coatings - conductive paints. Currently, the consortium is engaged in advanced work on the introduction of graphene for yacht coverings. According to the research, such coatings will be characterized by increased hydrophobicity, which will ensure better water removal from the surface and will provide a reduction of movement resistance for vessels.

Solutions applied by Tecra are protected by patents and we are interested in the production of Graphene for the external client as the subcontractor, or through the sale of its licenses and implementation of the production process at the client's facility (For example the Azoty Group in Poland).

# Graphene paint properties:

### Ordinary paint:



The properties of graphene materials produced by INTiBS PAN have the amazing impact on properties on chemical products such as:

- Lacquer (hydrophobicity of graphene has the brilliant impact on anticorrosive properties of lacquer)
- Greases (Addition of Graphene flakes gives a big benefits in terms of coefficient of friction reduction)
- Tyres (Simultaneously reduces resistance and increases grip in tyres)
- Filters (Using of Graphene foams structure as filter membranes excellent adsorption properties)
- Catalysis (Component of graphene with metals and metal oxides can be used for catalysis and photocatalysis)

### 7.1.2 NEW SOURCE OF WHITE LIGHT -LASER INDUCTED WHITE LIGHTING OF GRAPHENE FOAM

European Union directives have withdrawn from the lighting market incandescent lamps, characterized by a visible broadband emission advantage to the human eye. The white color of currently used energy-efficient LED sources and fluorescent lamps is created by mixing colors, which is reflected in a low color rendering index.

Our solution combines the advantages of these white light sources, as an energy-saving source of white light with a spectrum similar to sunlight. The team of experts is working on improving the active material and producing a MVP for a device.





### Better Photosynthesis

The broadband emission of graphene similar to sunlight causes that this energy-saving light source can be used for efficient photosynthesis in area with short day like polar circle



### Wirelessly

Excitation of graphene by invisible beam of laser give the possibility of lighting area without possibility of connection by electricity or optical fiber



# Without a spark

The optical fiber connection between excitation source and lightbulb with graphene foam causes that this light source is safety in dangerous conditions, when is a high concentration of hydrogen or methane in air like coal mine, cowshed etc.



## 7.1.3 GRAPHENE HIGH-POWER LIGHTING

As the first scientific research shows, the graphene foam obtained by Tecra Science Team shows great potential in its application in high power lighting devices excited by microwave techniques. These devices are characterized by emission efficiency that allows them to be applied in street lighting or lighting large areas such as sports halls. Tecra Ltd. is looking for an investor ready for cooperation and development of the invention, which is currently at the third level of technological readiness.





### A Longer Life of a Light Source

The non-temperature phenomena based on ionization processes causes an excellent stability of active element of light source



### High Brightness

The high power microwave excitation system similar to sulphur lamp allows to achieve the luminous flux higher than 100,000 lm for lighting large area like lighting sport hall, stadium etc.



### Energy Efficiency

The first research shows that energy efficiency of Graphene High Power Light Source is higher than 100 Im/W



# Specifications of Tecracoin

### 8.1 TECHNICAL DATA

Currency code:	TCR
Currency name:	TecraCoin
Consensus algorithm:	PoW
PoW block reward:	112,5 TCR with a lowering very halving period by 50%
Halving interval:	840,000 blocks, ~4 years
Block time:	2.5 min (DGW3)
Total Coin Supply:	210,000,000 TCR
Coins in premine:	21,000,000 TCR
Tnode requirement:	10,000 TCR
Tnode reward activation block:	600
Block Size:	2MB
Recommended number of transaction confirmations:	24
Maturity:	400
Proof-of-Work algorithm: Lyra2z:	Blake256 first round and Lyra2 (timecost = 8, r=c=8)
Features:	Zerocoin, Masternodes



#### 8.2 PREMINE & FOUNDERS REWARD

Up to 71 000 blocks of running the network, the block reward will be split as follows between founders, investors and masternodes:

Miner reward:	1%	
Dev team reward:	10%	
Science project reward:	40%	
Masternodes reward	39%	
Crypto interest program::	10%	

For the following 12 months (300 001 - 510 000), the block reward will be adjusted between miners, founders, investors and masternodes, in following way:

Miner reward:	5%
Dev team reward:	10%
Science project reward:	55%
Masternodes reward	15%
Crypto interest program::	15%

During another 12 months (760 001 - 970 000), the block reward will be split between miners, founders, investors and masternodes, in following way:

Miner reward:	15%
Dev team reward:	10%
Science project reward:	35%
Masternodes reward	20%
Crypto interest program::	20%

During the next 12 months (71 001 - 300 000) of running the network, the block reward will be split as follows:

Miner reward:	1%	
Dev team reward:	10%	
Science project reward:	64%	
Masternodes reward	15%	
Crypto interest program::	10%	

For the following 12 months (510 001 -760 000), the block reward will be adjusted between miners, founders, investors and masternodes, in following way:

Miner reward:	10%
Dev team reward:	10%
Science project reward:	40%
Masternodes reward	20%
Crypto interest program::	20%

During another 12 months (970 001 - end of the world), the block reward will be split between miners, founders, investors and masternodes, in following way:

Miner reward:	20%
Dev team reward:	10%
Science project reward:	20%
Masternodes reward	25%
Crypto interest program::	25%

## Security & Risk

In the world of cryptocurrencies our priority is to secure all investors and users of the Tecra network. Therefore, we have established Tecra Sp. z o.o. (Ltd).

The Company has signed a cooperation agreement with the Polish Academy of Sciences and Institute of Low Temperature and Structure Research in Wroclaw, Poland, which enabled the release of six Graphene-based patents. The Ministry of Science gave us permission to commercialize Polish patents. Our team consists of prominent scientists known in the industry and have spoken at the largest Graphene conferences, e.g. GrapChina.

### 9.1 TECHNOLOGICAL RISKS

TecraCoin is based on the Zcoin blockchain technology. The risk of weakness or breakthroughs in use in the field of cryptography, advances in cryptography or technology can pose a risk to cryptocurrencies and TecraCoin blockchain technologies.

From the technological side, TecraCoin ensures transaction security through the Blockchain network based on the PoW method, which is much safer than PoS. The costs of network attack using 51% sometimes exceeds the amount you can steal in this way.

A long block verification (maturity coin) allows the Tecra team to correct part of the chain in case of a hostile hard fork. Constant monitoring of network, even in case of the attack on Tecra's Blockchain, will allow for a quick response of the dev team to protect investors' capital. TecraCoins strategic portfolios are on so-called 'cold' wallets that are offline.



Hackers and other groups or organizations may try to attack a User's wallet or Website or launch unrestricted "DoS", "Sybil", "spoofing" attacks using malware (malware) or "consensus-based" attacks. ". Tecra Ltd. can not exclude that Tecra Coin may unintentionally contain weaknesses or defects in the source code. In this case, the TecraCoin may lose value and Tecra Ltd's ability to properly allocate or provide Services in accordance with the ICO Documentation may be impaired or completely impossible. As with other decentralized cryptocurrencies, Zcoin blockchain, which is used in Tecra Coin cryptocurrency, is vulnerable to "mining" attacks, including "double-spend", "mining mining power", "selfish-mining" and "race" attacks.

Mining attacks as described above may also be aimed at attacking other blockchain networks with which Tecra Coins cooperate, in which case TCR may lose all their value, and Tecra Ltd's ability to properly allocate or provide Services in accordance with the ICO documentation may be disturbed or completely impossible.

What's more, when receiving funds as a result of the exchange, Tecra Ltd. will make sure that the funds received are kept in a secure manner, with appropriate security measures. Regardless of the security measures used, there is no certainty that there will be no theft of cryptocurrencies as a result of a hacking attack, sophisticated cyber attacks, "DDoS" attacks, errors, vulnerabilities or asset defects. Such cases may include programming errors or source code leading to their use or misuse. In such a situation, Tecra Ltd. may not be able to recover the collected cryptocurrencies and may not be able to use these funds to develop the services. In this case, the development and launch of the services may be temporarily or permanently limited. In this situation, the Tecra Coins may lose its value and Tecra Ltd's ability to properly allocate or provide services in accordance with the ICO Documentation may be impaired or completely impossible.

#### 9.2 LEGAL RISKS

There is a risk that in some jurisdictions, Tecra Coins may be considered as securities, now or in the future. Tecra Ltd. makes no guarantee or assurance that Tecra Coins are not securities in all jurisdictions. The acquisition of cryptocurrencies, will be thoroughly analyzed by various control authorities around the world, which has so far yielded mixed reactions and legal effects. Tecra Ltd. legal capacity to provide TCRs in some jurisdictions can be eliminated by future regulations or legal action. In such a case, when it turns out that the Tecra Coins are not legally permitted in a given jurisdiction, Tecra Ltd. may cease operations in that jurisdiction or adjust the Tecra Coins so that they meet the requirements of the new regulations. Moreover, the functioning of the TecraCoin network and related blockchains may be disturbed by the queries or actions of control authorities, including limitations in the use or possession of cryptocurrency, which may disturb or limit their existence, slow down or limit their functioning in the future, the permissibility of their use and possession as well as influence their value. In this case, the Tecra Coins may lose its value, Tecra Ltd. the ability to properly allocate Tecra Coins or provide the services in accordance with the ICO Documentation may be disturbed or completely impossible.

#### 9.3 UNFORESEEN RISKS

Cryptocurrencies and blockchain technology is a new and untested type of investment. In addition to the risks mentioned above, there are other risks that Tecra Ltd. can not foresee and it is unreasonable to assume that such risks could have been predicted earlier. In the future, further unforeseen risks may arise.



## For investors

TECRA Project was established for issuing TecraCoin - a cryptocurrency which enables community to indriectly support the scientist. TecraCoin is a toll based on Blockchain technology that guarantees a secure way to distribute way a financial support.

The Project assumes that highend technologies (high tech industry) suitable for market and industialisation, such as Graphene, quantization of matter, gel that heals diabetic wounds, should be subject to such support.

### Organization of the project:

- The issuer of the digital currency is Tecra sp. z o.o. (Ltd.) based in Gorzów Wielkopolski, ul. Walczaka 112, 66-400, Poland and its co-founders are: Robert Anacki, Łukasz Gromek, Przemysław Karda, Krystian Kowalczyk and Krzysztof Podolski.
- The management board consists of 5 people (all are partners)
- Making key decisions requires the signature of 4 members of the management board.

# The company will issue a cryptocurrency with the following parameters:

- COIN SUPPLY: 210,000,000 coins
- PRE-MINING: (for investment purposes) is 10% of the entire Coin Supply (around 21,000,000 coins)
- Coin valuation against USD at the time of issue on the stock exchange (cryptocurrency) is USD 1.00;
- NEW BLOCKS will be generated every 2.5 minutes, within each block 112,5 coins will be issued, and are divided as follows:

Block Time	Crypto-interest	MN	PoW	Dev	Science Budget
0 - 71000	10%	39%	1%	10%	40%
71 001 - 300 000	10%	15%	1%	10%	64%
300 001 - 510 000	15%	15%	5%	10%	55%
510 001 - 760 000	20%	20%	10%	10%	40%
760 001 - 970 000	20%	20%	15%	10%	35%
970 001 - until end of the world	25%	25%	20%	10%	20%



Each investor having Tecra cryptocurrency, will be able to earn in the deposit/MN model in addition to the profits/losses on exchange differences. It will depend on the amount of TCR (cryptocurrency units) they have. During the periods given in the table, reward of the emitted cryptocurrency will be assigned to holders' wallets in an automated way.

Below you will find the simulation of the TecraCoin emission and the potential increase in the number of coins in an investor's account, with the quarterly crypto-interest payment and the Masternode service being active. It was assumed that an investor purchased 100,000 coins of TecraCoin cryptocurrency.

- 112,5 TCR are emitted with each block
- Each block is released every 2.5 minutes
- The quarterly crypto-interest will be paid out from the wallet, to which there is assigned 10% of released TecraCoins from each block, that is 11.25 TCR.
- Within 1 hour, 24 blocks are released, thus every hour 300 TCR are sent to wallet from which the quarterly crypto-interest will be paid out.
- within 24 hours, 7200 TCR will be sent to wallet from which the quarterly crypto-interest will be paid
- 648,000 TCR in 90 days (first 3 months) approximately this number of TCR will be accumulated on the account from which the quarterly crypto-interest will be paid out.
- After premining, there will be 21,000,000 TCR in circulation.
- If you purchased 100,000 TCR in private-sale period, after 3 months you can expect a crypto-interest of 0,004 (100,000 number of purchased TCR) divided by 25,000,000 (supply after 3 months from the start of mainnet) multiplied by 648,000 (number of cryptocurrency accumulated on wallet for crypto-interest payments) gives 2592 TCR, which represents 2,5% increase of TCR on a quarterly basis (over 10% per annum).

- TecraCoins working in the form of deposits / paid out as a crypto-interest are not an obstacle to run Masternodes, for which in the first 3 months a 4 times higher reward will be allocated and then after 3 months the Blockchain network based on computing power will be launched.
- While purchasing 100,000 coins of TecraCoin, even if 15,000,000 coins out of 21,000,000 coins from premining would be intended for the launch of Masternodes, this would give 1500 Masternodes on the network (10,000 TCR is required for the launch of a Masternode). This means that with 100,000 TCR, an investor could launch 10 Masternodes and the reward for this would be approx. 150 (blocks) \* 2.5 (minutes per block), that is every 375 minutes, which gives every 6h 15 minutes, that is 3.84 times per day = 3.84 \* 0.4 (39% of a block reward) \* 112.5 (TCR released per block) = 172.8 TCR per 24 hours = 15 552 TCR per quarter, which gives a quarterly increase in the number of coins by a further 15.5% when compared to crypto-interest themselves.
- In total, by purchasing TCR in private-sale or in the early phase of the Public ICO, you can gain 18% of TecraCoins within 3 months from the start of the network.

TECRA from the funds collected in BTC / ETH for the investment (funds will be collected in Bitcoin or Ethereum - direct sale or sale via the Internet to coin investors from premining) will allocate 70% of premining value for the first investments. The value of collected funds required to implement all planned investments is around USD 5,000,000 - this level of funds is indispensable to start Graphene production, quantization of matter in the industry and the production of wounds healing gel and its promotion (approx. USD 20,000,000).

30% of premining are operational costs. This includes: fees for listing on the cryptoexchange, promotional funds, creating TecraCoin and Blockchain technolmanaging team of developers (Softinity), creating concept of the brand (REBORN), website implementation (REBORN), legal services (Robert Brandt - a law Szwed-Ziemichod firm Marcelina from MSZtax). investment services (Andrzej Kail, Krzysztof Kielec) these are also funds essential for protecting stock levels on the cryptocurrency exchanges - that is, in the event of attempting to reduce the cryptocurrency rate there will be an appropriate amount of funds to repurchase Tecra cryptocurrency from ASK sheet to maintain the price or even to increase it and thus to encourage new investors.

The daughter company will be a subsidiary to TECRA company. TECRA guarantees that a special purpose vehicle in which fiduciary assets will be invested (zlotys, dollars, euros) from the sale of acquired Tecra-Coins will pay 100% of profits to repay investment costs and 50% of profits as a Tecra fund profit, for a minimum of 3 years, on an annual basis.

The daughter company will be obliged to return funds by purchasing and transferring TecraCoin cryptocurrencies to the investment portfolio. The redemption will take place through the stock exchange on which the TecraCoin cryptocurrency will be issued, which will increase its value.

The Supervisory Board consisting of experts belonging to the Tecra team will be financed from 5% of the investment value - the board includes Andrzej Kail and Krzysztof Kielec (experienced experts in the field

of investor's supervision from the Kostrzyn Slubice Economic Zone) and a lawyer (who will provide a guarantee for the company of legal services and supervision over the investment being carried out). The Management Board is to be professional, employed from the market and appointed by Tecra (Supervisory Board).

### 11.1 SWOT ANALYSIS

SWOT analysis is an analytical tool that serves to organize knowledge about the company and its product and the market it operates on. It involves identifying key factors for the success of the venture. It has two dimensions: due to the nature of the factor relative to the enterprise (internal, external) and its impact (positive, negative). Basically, it is assumed that external factors result from the environment and are independent and common to similar analyzed projects. Internal factors result from broadly understood resources assigned to a given project and can be influenced to some extent. From a two-dimensional combination, a SWOT matrix is created that has the following fields:

- STRENGTHS internal and positive factors
- WEAKNESSES internal and negative factors,
- OPPORTUNITIES external and positive factors,
- THREATS external and negative factors.

The weights are assigned to each of the factors, and each factor is then individually assessed for a given factor on a scale of 1 to 5. Such analysis for different projects allows them to be compared with each other on the basis of the four categories indicated above.

STRENGTHS				
Lp.	Factor	Factor Weight	Factor Value	Assessment
1.	Energy-efficient process of expanding graphene	0.25	4	1
2.	Strong scientist and development team	0.25	5	1.25
3.	Technology protected by patents	0.25	4	1
4.	Prepared infrastructure for the production of graphene	0.25	5	1.25

WEAKNESSES				
Lp.	Factor	Factor Weight	Factor Value	Assessment
1.	Low level of implementation readiness	0.25	3	0.75
2.	High price of the input material (graphene)	0.25	4	1
3.	High risk technologies and little commercial application	0.25	3	0.75
4.	The early stage of the market	0.25	3	0.75
Summary		1	N/A	3.25

OPPORTUNITIES				
Lp.	Factor	Factor Weight	Factor Value	Assessment
1.	A chance to cooperate with a professional partner at the stage of fetal development	0.25	5	1.25
2.	A wide spectrum of potential graphene applications	0.25	4	1
3.	Positive prospects for the development of the market for graphene composites	0.25	3	0.75
4.	The possibilities offered by the blockchain market	0.25	5	1.25
Summary		1	N/A	4.5

THREATS				
Lp.	Factor	Factor Weight	Factor Value	Assessment
1.	Harmfulness of graphene for the environment	0.25	4	1
2.	Low supply of highly qualified employees in the industry	0.25	3	0.75
3.	Competition from Chinese graphene producers	0.25	5	1.25
4.	A long period of boom in stock markets	0.25	2	0.5
Summary		1	N/A	3.5

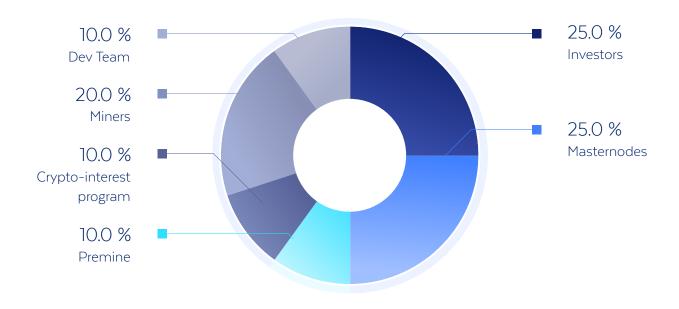
The data collected in the above table indicate a clear advantage of graphene-based technologies. Both internal and external characteristics have a similar impact on the perception of the attractiveness of the project. One should note the advantage of positive features, which are mainly driven by:

- Strong scientist and development team
- Prepared infrastructure for the production of graphene
- A chance to cooperate with a professional partner at the stage of fetal development
- The possibilities offered by the blockchain market

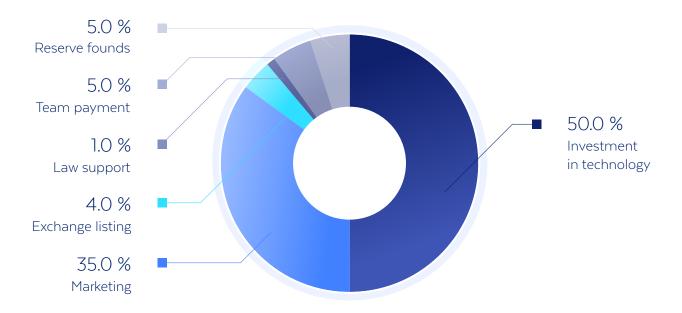
These factors confirm the low level of risk of the project, especially in the face of the growing market and the growing graft on an industrial scale.

## 11.2 FUNDS AND CRYPTOCURRENCY DISTRIBUTION

### Final Cryptocurrency Distribution



### **Funds Distribution**



# Our Team



### Robert Anacki

#### Co-Founder

Bachelor of Computer Science, enthusiast of new technologies, entrepreneur and social activist. For 14 years, he has been successfully running his own businesses on the national and international stage. He has been professionally connected with blockchain and cryptocurrency industry since 2014. He has his own cryptocurrency mine (altcoin) based on GPU system.

In 2017, together with the Deputy Prime Minister of Poland and the Minister of Science and Higher Education, he formed the Alliance party (original: Partia Porozumienie). In public and political life he promotes the free market, works on the good law for entrepreneurs, supports legislative works and advises on the regulation of the cryptocurrency industry and blockchain applications in public life.

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# Przemysław Karda

#### Co-Founder

Since 2006, he has been associated with the IT market. At the age of 21, he founded the first technology company operating in the UK. A former Polish army officer trained in the US Air Force. The creator of the Business Forces leadership program. The co-owner of Belters sp. z o.o. - one of the largest Altcoin mine in Poland, involved in ICO projects and applications based on blockchain technology.

The author of science-fiction book entitled 'Interregnum', which was a bestseller in science fiction category in Poland. Traveler, philosopher and entrepreneur.









### Łukasz Gromek

#### Co-Founder

A conscious man with extensive interests, a programmer, IT specialist with many years of experience especially in independent projects, a specialist in blockchain technology. An engineer and graduate of Lublin University of Technology, Polish-Japanese Academy of Information Technology and the first edition of innovative studies 'Navigators after the Future' at the Warsaw School of Management – graduate and post-graduate school.

He started his professional career in the computer hardware industry. Untainted with corporations, he gained his extensive management experience on executive positions in private companies. For 10 years, he has been engaged in independent business ventures related to business coaching, photography, IT, fishing, journalism and media.

Currently an entrepreneur, who runs IT and new technology businesses connected to the following companies:

G1 Studio Sp. z o.o. (Ltd.), Belters Sp. z o.o. (Ltd.), Tecra Sp. z o.o. (Ltd.), Navicoin, Claxon.

In his private life he is a vegetarian and an enthusiast of mountains, nature and bicycle trips.

Find my on









# Krzysztof Podolski

#### Co-Founder

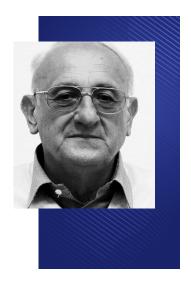
Trained manager and certified business trainer with many years of experience in the implementation of projects, B2B sales and networking. He has been involved in the cryptocurrency and blockchain industry since 2016. In the TecraCoin project he deals with sales, business-related environment and the commercialization of patents. Thus, he provides a bridge between science and business.

Although, he is fascinated by new technologies and opportunities they create for humanity, he always tries to keep balance between the material and spiritual world. Therefore, he constantly improves his mind and acquires new competences, regularly meditates, and spends his free time outdoors far from the hustle and bustle of big cities.









### Prof. Dr hab. Wiesław Strek

#### Science expert

Head of the Department of Excited State Spectroscopy at the Institute of Low Temperature and Structure Research of the Polish Academy of Sciences in Wroclaw (since 1971).

Scientific activity: optical properties of rare earth compounds and transition metals; theory of electron relaxation (radiative and non-radiative transitions, cooperative interactions); laser spectroscopy; optical sensors and biosensors; laser materials; technologies of luminescent materials (nano phosphates), transparent ceramics, porous thermal insulation materials, nanoceramic materials for fuel cells; cryotherapy; phenomena of photodynamic therapy and diagnostics; laser therapy; laser induced white light emission in materials containing rare earth ions and in graphene.

Organizer and co-organizer of over 30 national and international conferences, including:

- Rare Earth Spectroscopy,
- Excited States of Transition Elements,
- International Conference on f-Elements,
- International Conference on Luminescence,
- International Conference on Sol-Gel Materials,
- International Conference Rare Earth Materials.
- Laser Ceramics Symposium

Prof. dr hab. Wiesław Strek is a supervisor of 11 doctoral thesis and a winner of many prizes and awards, including:

- Gold medals at the International Innovation Exhibition "Eureka" Brussels (1999, 2000, 2002, 2004, 2006,2008, 2009);
- Knight's Cross of the Order of Invention of the Kingdom of Belgium (2003, 2006 and 2010);
- Knight's Cross of the Order of Polonia Restituta (2017)

He participated in the implementation of many research, development and purpose projects. Among other things, he was:

- the project manager of NCN MAESTRO Project, (2013-2018); 'Exploring the mechanism of broadband anti-Stokes white emission in lanthanide compounds';
- the head of the subtask FP 7 CLEANSPACE, (2011-2014); Removing small 'space debris' with laser light and complementary technologies;
- the project manager of NanoMat EIT +, (2010-2014); Materials and nanomaterials for photonics, micro- and nano-electronics and sensors, nanomaterials for photonic and biomedical applications;
- the project manager of N N507 233140, (2011-2012); Synthesis and investigation of optical properties of nanocrystalline materials doped with Cr3 + ions based on Y3Al5O12 and MgAl2O4.

Currently, he is the coordinator of the European Commission Transfer project under the Horizon 2020 program. As part of the international cooperation, he regularly participated in scientific internships in Denmark and visited Brazil, France, Finland, Israel, Germany, Italy, the USA and Belarus many times. He has lectured at numerous national and international conferences (over 100 lectures). He is the cofounder of over 60 patents and patents pending concerning, i.a.: laser therapy, security, nanotechnology, sol-gel technology, porous thermal insulation, graphene technologies, luminescent materials, lighting.

Professor Dr hab. Wiesław Strek has implemented new technologies in the following technology companies: Medical Center for Laser Techniques Laser Secura Systems, Haemato, Nano-Tech, Medical cryogenics, Nanovectors Ipanterm. He is also the co-author of the Polish Cryogenic Chamber. He is the author or co-author of 530 publications in scientific journals and a member of editorial committees of the following magazines: Materials Science-Poland, Journal of Alloys and Compounds -Elsevier, Journal of Rare Earths - Elsevier, Acta Bio-Optica et Informatica Medica, Reports in Physics - Elsevier.

The Professor is also the editor of many conference publications and monographs: 'Rare Earth Spectroscopy', 'Photon Emission In Biological Systems', 'Biological Luminescence', 'Excited States of Transition Elements'.









# Prof. Dr hab. Krzysztof Piech

#### Blockchain and Law Expert

Prof. Dr hab. Krzysztof Piech obtained a postdoctoral degree in the field of economic sciences in the discipline of economics. Since 2016, he has been an Associate Professor in the Department of International Economic Relations at the Lazarski University. He has 20 years of experience in lecturing on economics and management in Polish and English at bachelor, master, postgraduate and doctoral studies in Poland and abroad. He has completed several theoretical and practical research projects for ministries and other public institutions in Poland and abroad. He also completed many internships, including a job-shadowing internship with former British Foreign Minister David Milliband. Scholarship holder at University College London and National University of Singapore - one of the best universities in Europe and Asia.

He runs expert projects mainly for public offices and institutions. He is also a co-author of programs for several political parties.

He predicted the last global financial crisis and warned the public opinion and politicians against it in his articles already published in August 2007 (which was over a year before the collapse of Lehman Brothers). He also foresaw the recent global recession of 2001-2002 and its impact on the Polish economy (in his doctoral dissertation). He is also one of the main authors of insurance market forecasts in Poland.

He is the president of the Knowledge and Innovation Institute – one of the few non-public research institutes in Poland, as well as the expert on macroeconomic modeling and forecasting and in financial markets. He cooperates with Polish and foreign ministries and offices. He is the business leader of "Blockchain and Cryptocurrency" Stream – the program of the Ministry of Development and the Ministry of Digital Affairs entitled "From paper to digital Poland" – where he manages works of about 80 people.

He is a member of the British Alumni Society, the Polish Economic Society, the Polish Bitcoin Association and Bitcoin Foundation.









# Filip Pawczynski

#### Blockchain Expert

He runs the FP IT Management company, which has produced and introduced to the market the fastest in its class device for transaction authentication in Bitcoin - Bi•Fury USB ASIC Bitcoin Miner; So far, this is the only company of this kind in Poland. He is the only Pole who gave interview to the printed version of the prestigious "Bitcoin Magazine".

He is the founder and president of the Polish Bitcoin Association – a non-profit organization that helps to better understand the potential of Bitcoin and Blockchain technology.

He is also the Advisor to the Ministry of Digital Affairs in the development stream of "Blockchain and Cryptocurrencies" on the "From paper to Digital Poland" program.

In addition, he is the Vice-President of Chamber of Commerce of Blockchain and New Technologies in Poland, which aims to represent the interests of the blockchain industry, education, cooperation with educational and government bodies, shaping the principles of good practice and supporting the economic development of Poland.

He speaks at numerous conferences and seminars since 2014.

The author of numerous publications and statements in media on the subject of economy and digital currencies.

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# Krishnendu Chatterjee PhD

### Blockchain Expert

Result-oriented Ph.D. with a proven track record of managing and leading interdisciplinary projects and contributed to increase revenue stream for my employer.

I am currently responsible for driving the early adoption of blockchain solutions in healthcare, academic and pharmaceutical sector; through a diverse set of actions which ranges from the traditional business development to a more unique and exciting role of working with a cross-functional team for market specific product development.

Extensive knowledge about ICO/IEO Roadmap & Launch process; having worked on different ICO/IEO in white paper, devising tokenization model, market analysis, exchange listing & go-to market strategy, et al., both in my personal and professional capacity.









### lan Scarffe

#### Blockchain & Business Expert

lan Scarffe is a serial entrepreneur, investor and consultant with business experience from around the world. As a leading entrepreneur, lan is on a personal mission to develop a culture of entrepreneurship, helping startups achieve their full potential as well as helping to expand existing companies. Ian has founded 'Binkplus', a startup incubator in Europe.

A leading expert in Bitcoin, Blockchain and Crypto industries, lan is at the very heart of revolutionizing the financing industry across the globe and currently consults and advises for a range of multi-million dollar companies.

lan's overall mission is to foster a society of economically independent individuals who are engaged citizens, contributing to the improvement of their communities across the world. Ian now focuses on the Blockchain industry and offers advice, consulting services, connections to Blockchain experts and investor relations strategies.

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# Przemyslaw Zatylny

#### **Medical Expert**

He graduate Zielona Góra University of Technology in the field of electro-energy information systems. He also completed post-graduate studies at the Pomeranian Medical University, in the field of Management and marketing in health facilities, currently a student at the WSB in Wroclaw in the MBA Executive.

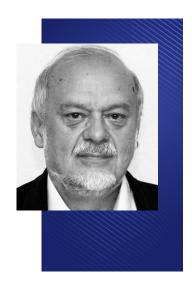
From 2000, he was associated with the health care industry. An employee and manager at international pharmaceutical concerns (Pfizer, Boehringer-Ingelheim, STADA, Novo Nordisk), and now at Italian Recordati concern. Specialist in the field of promotion, drug introduction, marketing software development, implementation of marketing strategies and loans. Participant of many developmental trainings "Sendler - School of Professional Development", CRM Treading, Medical DATA Management. Entrepreneur operating on the B2B market in the world of payment cards and business security services.

In addition, he is the Vice-President of Chamber of Commerce of Blockchain and New Technologies in Poland, which aims to represent the interests of the blockchain industry, education, cooperation with educational and government bodies, shaping the principles of good practice and supporting the economic development of Poland.









## Prof. Dr hab. Andrzej Jezowski

### Science Expert

He is a graduate in physics at the Faculty of Mathematics-Physics and Chemistry at the University of Wroclaw. He received the title of professor of physical sciences in 1998. Since 1975 he has been working at the Institute of Low Temperature and Structure Research of the Polish Academy of Science. Between 2002 and 2010 he was the Deputy Scientific Director of INTiBS and since 2001 he has been the Director of the Institute.

He is a member of: Commission Al of the International Institute of Refrigeration in Paris (since 2000), the Editorial Committee of the journal of Low Temperature Physics (since 2002), the Scientific Council of the Institute of Molecular Physics PAS in Poznan (since 2011), the Scientific Council of the International Laboratory of High Magnetic Fields and Low Temperatures in Wroclaw (since 2011) and the chairman of the Presidium of the scientific center 'Center of Research for Advanced Materials and Intelligent Structures'.

Professor Andrzej Jezowski is the author of several monographs and over 170 articles in scientific journals from the Philadelphia list, cited more than a thousand times, as well as numerous lectures and presentations given at scientific conferences in the field of solid state physics.

He has repeatedly been the organizer and co-organizer of international conferences and the initiator of regular 'Cryocrystals and Quantum Crystals' conferences. Professor Jezowski closely cooperates with numerous international institutions involved in research in the field of low temperatures.

His research interests focus mainly on issues related to thermal properties of molecular crystals, superconductors, BioCeramics and amorphous materials.

He is the author of more than 170 scientific papers published in journals from the Master Journal List.









### Dariusz Hreniak PhD

Science Expert

Research associate and Deputy Director for the Implementations at the Institute of Low Temperature and Structure Research of the Polish Academy of Sciences in Wroclaw, Poland. Present scientific activities include: laser spectroscopy, nanocrystals synthesis, sol-gel materials, rare-earth elements, luminescent markers, graphene composites, nanoceramic processing and characterization and luminescence properties of the rare-earth ions in glasses. Since 2005, he is one of the editors of regular issues of Optical Materials as well as special issues of Journal of Luminescence, Journal of Rare-Earth and Optical Materials (Elsevier). CEO in the following start-ups: Nanovectors Sp. z o.o. (2011-2017, optical securing of valuable objects) and Ipanterm Sp. z o.o. (since 2013, new fire-proof insulating materials). Published more than 140 publications in international journals (h-index 28, >2300 total citations) and 16 patents or pending patents.

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# Anna Wedzynka

Science Expert

Master of chemistry at the Faculty of Chemistry of the University of Wroclaw. Scientific activity: synthesis of graphene composites. Since 2012, she has been working at the Institute of Low Temperature and Structure Research of the Polish Academy of Sciences in Wroclaw. She is the author of many publications in scientific journals.

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### Marcelina Szwed-Ziemichód

Legal & Tax Expert

Tax advisor & advocate, founder at MSZtax. She works with companies and start-ups from NewTech and IT sector, including blockchain and cryptocurrencies. Member of the working group dedicated to distributed ledger technologies and blockchain established by the Polish Ministry for Digital Affairs.

Member of the working group Blockchain and digital currencies supporting Polish Financial Supervision Authority. Lecturer during many events dedicated to cryptocurrencies and blockchain.

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# Krzysztof Kielec

**Business Expert** 

Entrepreneur, economist and lawyer. He graduated from Faculty of Finance and Banking at Cracow University of Economics and Faculty of Law at Warsaw University SWPS. He completed doctoral studies of Economics at the University of Szczecin.

He currently works as the CEO of Kostrzyn-Slubice Special Economics Zone and is responsible for the development of investments in western Poland, providing business, tax and public aid consulting and real-estate advising. He has successfully helped to complete many projects. He is also the CEO of woman basketball team competing in the Euro Cup.

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### Robert Brand

### Legal Expert

He graduated from the Faculty of Law and Administration at the University of Warsaw, his MA dissertation on contract law was supervised by Prof. Dr hab. Marek Safjan (PhD). He completed studies in German and European Law at the European University Viadrina in Frankfurt/Oder.

In the years 2000-2004, he worked for the Kostrzyn-Slubice Special Economic Zone in Kostrzyn on Oder. He passed the judicial examination in the year 2000. He specialises in state aid for entrepreneurs. The author of the Polish translation of the European Union's Community Customs Code together with implementing provisions and explanations, and a publication on commercial companies and partnerships law and liability of managers. He is fluent in German and also speaks English. He was awarded the prize for the best legal adviser in the Forbes Professionals Contest 2012.

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### Andrzej Kail

#### **Business Expert**

A 47-year-old graduate of the Faculty of European Law at the Viadrina University in Frankfurt (Oder) and the Faculty of Law and Administration at the University of Adam Mickiewicz in Poznan. A licensed real estate agent. He is a chairman in the Supervisory Board of Miejskie Zakłady Komunalne Sp. z o.o. in Kostrzyn on the Oder. A marketing director in the Kostrzyn-Słubice Special Economic Zone S.A.

He participated in raising capital to the Zone in the amount of over PLN 9 billion. He also took part in the acquisition and organization of legal procedures in the settlement of over 140 factories operating in the Zone. A local government leader, well-versed in issues related to local law and business services at every level of administration. Married, two daughters.









### Piotr Marcinik

Blockchain & Marketing Expert

Graduate of Devry Uniwesity at computer science major, serial entrepreneur, expirienced in sales and marketing, since 2015 Blockchain entusiast edukator and influencer.

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# Maciej Partyka

Blockchain Developer

Senior Full Stack Developer & Blockchain Developer. He has been involved in programming for 10 years. He spent 2 years in a digital company as a team leader. He dedicated his last years to explore knowledge and work on the blockchain, including smart contracts. Connected with Softinity since 2017. The first place at Warsaw Ethereum hackathon 2018. A Lead Blockchain Developer in TecraCoin.

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### Daniel Borowski

Blockchain Developer

Working in software engineering industry since 2006. Provided consulting technical services for banking and finance sector. Designed and implemented high scalable enterprise systems for large organizations using .NET, C++, SQL Server, Oracle. Worked in different positions - Engineer, Architect, Tech Lead on different projects - backend, web, desktop. Interested in cryptography and performance tuning.

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# Filip Nasiadko

Project Manager

He has been involved in the IT market for 6 years. He is an experienced project manager implementing IT projects, Computer Science engineer at the Warsaw University of Technology and co-founder of the Softinity company. For several years, he has been intensively exploring knowledge about blockchain technology.

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Jakub Zak

**Business Expert** 

He sells from the age of 8. Some will probably say: "impossible."

Entrepreneur from an early age. He participated in the creation of the ICO campaign of the Kingdom of Kabuto, which collected money for a private island.

Leader, he built several thousand sales team in the multi level marketing system. He has been involved in charity and scouting for 15 years. Entrepreneur, co-founder of own brands, such as: Onglow, Solar Board.



### Michał Tomaka

#### Art Director

Graphic Designer/Art Director; graduated from the Warsaw School of Advertising; with over 10 years of experience in advertising industry and new media. For over 5 years he has been working in several of the largest advertising agencies in Warsaw, recently as a Senior Graphic Designer in ArsThanea. For over 4 years, he has been running his own interactive studio REBORN S.C. He used to work for such brands as: Nutricia, KGHM, Deloitte Polska, Grupa Azoty, Asseco Data Systems, K2, SKM Szybka Kolej Miejska (Fast City Rail), the Chancellery of the Prime Minister. He passion is in the implementation of websites as well as works related to the design of interfaces, mobile applications and visual identification. His works has been awarded many times by such industry-related websites as Behance.net, logopond.com or in the competition organised by the Advertising Creators Club (KTR). In his free time he loves photography and works on images using photo manipulation methods.

He has been often involved in the implementation of start-ups. His first authorial program from 2011 was wiemto.pl - a platform for sharing knowledge and trainings and myesti.com - the web application for creating quotes and communication with the client. He was also the co-creator of the Galaxy Dwellers game together with the eccgames.pl studio.

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# Krzysztof Łosiak

#### Frontend Developer

He has been involved in the technology industry since 2007. He specializes in the implementation of user interfaces for the purpose of web applications and in a broad sense digital industry. He gained experience working in Warsaw interactive agencies on projects for such clients as Intel, Asseco, Castorama, Subaru and many others. Currently he is the co-founder of the Reborn studio and co-creator of the startup myesti.com









#### Find my on

Radosław Struniawski

Senior Programmer

Biotechnologist and IT specialist. For many years, he has been involved in research in the field of human genetics. The author of scientific publications, conference speeches and participant of internship trainings in the USA, Italy and Sweden. Since always, he has been passionate about new technologies and for 4 years he has been a full-time programmer. He has worked on many projects, mainly web applications.









Kaja Kretschmer

Community Expert

She has years of successful experience in marketing, copywriting and social media. In the Tecra project she is responsible for writing and publishing texts, contacting media and supervising social media channels.

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# Krystian Kowalczyk

Marketing Expert

In the IT world since 1997, in the crypto world since 2012, in marketing for 10 years. Engineer, entrepreneur and enthusiast of blockchain technology. He is strongly committed to everything he does, precise, results-oriented. He has an extensive experience in business, IT and e-marketing. He systematically broadens his industry knowledge and is up-to-date with all technological novelties.

He is a member of the Polish Bitcoin Association and the government team for cryptocurrency. He believes his future will be connected with blockchain technology and he is convinced that thanks to Blockchain we have entered another Industrial Revolution.









### Anna Karda

#### Editor

A graduate of the University of Warsaw in the field of English Philology, translation specialization. She has been involved in crypto for 2 years. Translator and expert in three languages. She is passionate about sport and new technologies. In her free time, she likes playing The Elder Scroll games. In Tecra she is responsible for communication, therefore she informs the Tecra community on a regular basis on the progress in the project.

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### Marcin Godlewski

#### Marketing Expert

Martin Godlewski has been involved in online marketing since 2006. As one of the top internet marketers in Poland, Marcin has done campaigns for the biggest Polish personal development company, co-authored the book "The Bible E- business", founded the first online training portal "MiastoSzkolen.pl" and founded the first Poland affiliate Partner Program – ProPartner.

Marcin has created multiple thematic portals, training and marketing groups, online courses and e-books. In recent years he has specialized in the organization and marketing of online training while working for the largest training company in Poland. He is also the co-creator of a training brand in the field of network marketing, and a CMO for the world's first professional mobile application with gamification for network Marketing. Currently, he focuses on the subject of Blockchain, supporting his ICO experience and is the CMO of the innovative Crypto exchange.







# Contact

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