BLOCKBIRD™

AI AND BLOCKCHAIN POWERED PERSONALIZED CRYPTO INFORMATION PLATFORM

Aggregated news, verified by the community, boosted by artificial intelligence, tailored to your needs.

Date: April 23th, 2019

Version: 1.4.1*

TABLE OF CONTENT

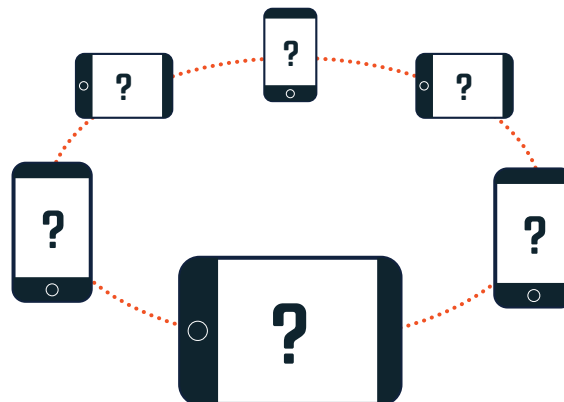# 1. THE RISING TIDE OF CRYPTO NEWS, RIFE WITH MANIPULATION

Are you into cryptocurrency and blockchain technology? Do you know the biggest secret of all the successful crypto contributors? What gives them the edge in this over-saturated market?

You maybe guessed it, it's the access to knowledge and information. People who are in-the-know, will always outmanoeuvre the rest of the crypto market. But how can you get in that position of power?

It is no easy task as staying up-to-date in the current crypto market is overwhelming to say the least. There is an enormous amount of information coming from a multitude of news sources. To make it even worse, the whole crypto field is notorious for its market manipulation. There were many cases when people had a completely wrong idea about a project, and their vulnerability often resulted in heavy financial losses.

To cap it all off, we are currently dealing with:
- **An excessive amount of information:** There is an ever-increasing amount of cryptocurrency information. On top of that, replications of the same content add up to the already-vast amounts of information.
- **Dispersed information sources:** Useful information with all its replications is residing on project websites, social media, forums, exchanges, market data sites, and blockchain explorers.
- **Manipulated news:** There is a lot of manipulation present in the cryptocurrency space. The manipulation sources include various influencers, their followers, crypto projects, and "Pump and Dump groups."
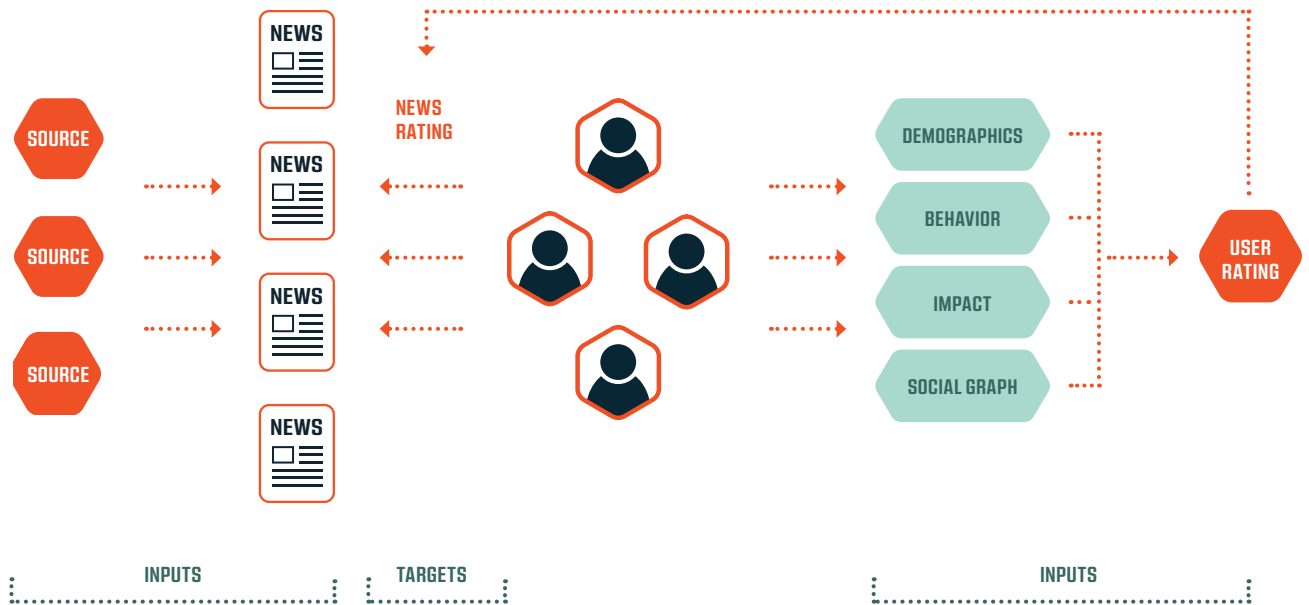

2. WHAT IS BLOCKBIRD™?

2.1. WISDOM OF THE CROWD ENHANCED WITH ARTIFICIAL INTELLIGENCE

The Blockbird™ platform is being trained using the community's collective intelligence, thus creating a hybrid intelligence system. Our users will be incentivized to appropriately rate the news by means of self-interest and with the help of our rating system, which will distribute proportional rewards to our users in correlation with their activity and helpfulness of their rating.

The wisdom of the crowd refers to the collective decision-making power of groups of individuals. Utilizing the collective wisdom of groups has been shown to be very effective in solving many types of tasks involving prediction or inference pertaining to human behaviour. Academic literature on the topic has shown that since each individual in a crowd has his/her own unique bias, gathering many individuals in a crowd nullifies individual biases, thus providing very robust, accurate predictions.

There are several ways to model crowd wisdom, including modelling crowds within crowds, and allowing individuals to be influenced by the decisions of others within the crowd. The Blockbird™ platform will incorporate these models and augment them by using sophisticated text analytics and other state-of-the-art artificial intelligence methodologies.

2.2. HOW DO WE TACKLE NEWS MANIPULATION?

We are using artificial intelligence to recognize manipulated news. We can do that **by observing the community response, source reputation, content processing, and pattern repetition of the spreading news**. To further improve the response time of our users, we are developing an **advanced alert system**, making sure our users are among the first ones to react when a news piece turns out to be false.

2.3. WHY ARE WE USING THE BLOCKCHAIN TECHNOLOGY?

The blockchain technology allows us to enhance our product by enabling the credibility of voting and ratings on the platform. When we **store the rating results on the distributed ledger,** we make sure they are transparent and immutable. It also allows us to **reward the community rating of the news**.

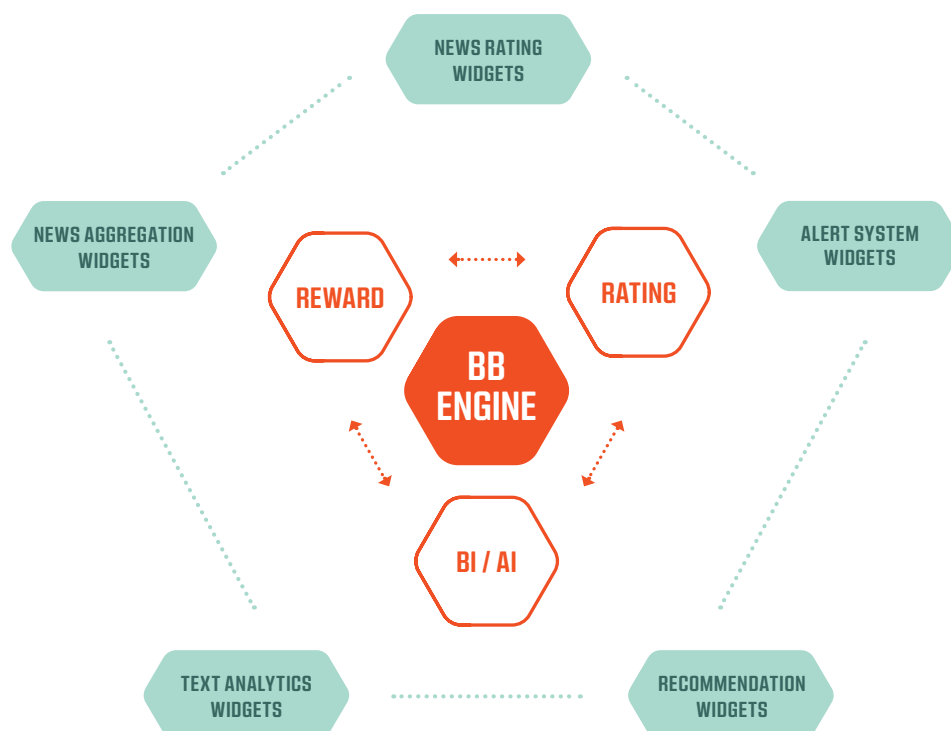# 3. HOW EXACTLY ARE WE PROCESSING AND ENRICHING THE NEWS?

The basic principles of our platform are clear; however, we want to give you a quick look into the approaches we use to deal with the massive amount of information available. All the following techniques ensure the perfect synergy that allows us to deliver the best possible information content.

- **News aggregation:** The Blockbird™ platform aggregates all of the available information by means of data gathering. We apply a gathering technique that enables us to automatically collect the vast majority of crypto news from a multitude of online news sources.
- **Intelligent news evaluation:** Inputs are presented to artificial intelligence algorithms in order to automatize the crypto news evaluation process. The machine learning algorithms process the input and act in line with the community actions when categorizing and presenting the news. Business intelligence concepts are used to visualize the number of views, votes, ratings, and popular trends. To complement this approach, we are using machine learning methods to transform all of the available data into a meaningful conclusion.
- **Crypto news rating:** The rating system is supported by an algorithm that calculates the value of presented information through parameters such as the number of votes per information, user credibility rating, amount of views per information, and number of shares per information.
- **Text analytics:** We are turning text into data for analysis via the application of Natural Language Processing and analytical methods. Using text analytics, the Blockbird™ platform provides inputs to other ML algorithms as well as helps users to easily and quickly consume the published content.
  With the help of text analytics, we can:
    - correlate the content of the crypto news with users' ratings to understand what makes crypto news trustworthy and objective;
    - analyse the content, sources, authors, and other relevant parameters to detect and exploit interconnections between crypto news or what we call the "news graph";
    - calculate the similarity index that will be used to detect duplicated crypto news as well as make recommendations for users;
    - categorize news in both pre-defined and ad-hoc categories;
    - extract keywords;
    - create content summaries.
- **Recommendation system:** The Blockbird™ platform uses the results of crypto news and user-input-based, machine-learning models to give users recommendations for the content they are most likely to be interested in as well as present the information in a way that is most appropriate for each user.
- **Marking and alert system:** An alert system is put in place to recognize misguiding material that can appear on our platform, whereas the marking mechanism is here to tag questionable and contradictory crypto news. The combination of crypto news marking and the crypto news alert system acts as a safety net for our users when dealing with misguiding information.

3.1. RATING SYSTEM

Our rating system includes the interconnected rating of the news, users, and information sources. Raters are incentivized to make quality ratings through our **reward system** that pays out the BBIRD tokens to the users in line with their contributions to the platform. The members can either choose to use the tokens to subscribe to new functionalities of the Blockbird™ platform (thus increasing the value of information the user is getting as well as his future rewards) or store the tokens.

3.1.1. NEWS RATING

The purpose of the news rating is to identify the crypto news in terms of relevancy, accuracy, and objectivity to utilize user input as data for AI algorithms that will learn to recognize, categorize, and summarize the presented information.

3.1.2. USER RATING

We rate our users based on the usefulness of their past evaluations. The weight of a user's vote is in line with his personal rating score. The user rating system, therefore, enables us to emphasize the votes from the users who already have a reputation on the platform.

3.1.3. SOURCE RATING

The information providers, such as crypto news pages, influencers, and individuals, gain or lose credibility based on the quality and correctness of their information.

3.2. REWARD SYSTEM

Users are rewarded with BBIRD tokens in two ways:

- Users are rewarded for every action that helps the Blockbird™ platform to display and identify relevant crypto news, find manipulated crypto news, discover duplicated crypto news, correctly rate credible sources and influencers, and post meaningful comments, to name a few.
- Secondly, users are rewarded for several other activities on the platform depending on their engagement (such as the time spent on the platform, number of votes and their impact, the ratio between read and followed news, etc.).

3.3. VALUE-ADDING VISUALISATIONS

We are using BI to visualize important statistics, such as the number of views, popular trends, number of votes, and ratings. The platform presents the data through our information blocks, which are cognitive tools that improve our "span of control" over a lot of data. Information blocks are designed to help users maintain the so-called situational awareness:

- perception of the elements within the platform,
- comprehension of the current situation, and
- projection of future status.

The information on a dashboard is presented visually as a combination of text and graphics, with an emphasis on graphics – not because graphics are cute or fun, but because graphical presentation can often communicate more efficiently and comprehensively than text alone.

4. BLOCKBIRD™ TOKEN

The Blockbird™ token (BBIRD) is a fully ERC20 compliant utility token that tokenizes the Blockbird™ platform, its services, and features.

The Blockbird™ token is the vehicle that enables the exchange of information between the platform and the users. Using the concept of different subscription levels, users will not only be able to participate on the platform and receive insights through information widgets, but will also be able to query the platform using simple language exposed through Blockbird™ API and receiving the answer based on Blockbird's advanced algorithms.

BBIRD tokens are issued at the Token Generation Event, that takes place before the beginning of private sale. The smallest quantity of the BBIRD token is 0.000000001 BBIRD (9 decimals).

4.1. REVENUE MODEL

The BBIRD revenue model is subscription-based in order to strike the best balance between the value we provide to our users and their expenses. A user can choose the appropriate package based on his preferences and needs. All features and subscriptions can be paid for with BBIRD tokens or the user's rewards earned by using the platform.

Please see the Blockbird™ Blueprint (Full version) for more details.

4.2. BLOCKBIRD™ STAKING SYSTEM

The Blockbird™ platform is set to steadily grow and develop over time. The same goes for its fuel at the core – the BBIRD token. One key component in this process is that investors and interested parties believe and monitor the BBIRD token closely. This will be achieved through Blockbird's reward system, the platform's regular usage, and users' engagement.

Below we present three main staking approaches and incentive types for contributors, users, and sources. Each party can participate in more than one staking model, yet can only do so with purchased BBIRD tokens. BBIRD tokens received through the Blockbird™ reward system will only be used for subscription payments.

4.2.1. STAKING FOR CONTRIBUTORS

As we are sure some contributors will look beyond the utility aspect of our token, we present the addition to our reward system – the Blockbird™ staking system. The system will reward investors and users for staking (holding) the BBIRD tokens for a fixed period of time. The bonus that is earned through staking varies depending on the time-span in which the tokens are held. The longer the stake duration, the higher the bonus.

Our predefined staking duration and amounts are:

Staking (Holding) stage and duration	Staking (Holding) bonus
After the last Milestone based tranch sale (duration 6 months)	3 %
After the last Milestone based tranch sale (duration 12 months)	7,5 %

The minimum staking amount for contributors is set to 100,000 BBIRD tokens (approx. 10,000 USD*).

4.2.2. STAKING FOR PLATFORM USERS

Platform users will be encouraged to stake their BBIRDS in exchange for additional subscription benefits, higher reward multiplicators, and the unlocking of special platform features not available to all users.

4.2.3. STAKING FOR CONTENT SOURCES

Additionally, we plan to implement a staking system for sources. Staking will, on one hand, enable us to prioritize the development of news scrapers and content processors for a specific source. On the other hand, it will establish sources' commitment to publish relevant content. Sources with higher stakes will be moved higher on the implementation timeline, however the staking system will not provide sources any advantage in the rating process, which will remain completely independent and based on the rules and approaches described in previous chapters.

5. CONTRIBUTION INFO

60% of all tokens are reserved to be sold in different Contribution stages. The remaining is reserved for the company operations, team, reward & bounty pool, and future reserves.

5.1. TOKEN DETAILS

CONTRIBUTION SUPPLY: 180,050,000
PRIVATE SALE MAX CAP: 1,000,000 USD
PRIVATE SALE MIN CAP: 250,000 USD
MAX TOKEN SUPPLY: 300 000 000

*The price of a token is now set to 0.10 USD per token. The final price will depend on the amount of ETH gathered during each Public Contribution stage.

The Blockbird™ token (BBIRD) is distributed at a dynamic rate to all contributors during the Private sale and Milestone based tranch sales. A total of 180,000,000 BBIRD tokens are available. There is a bonus allocation for those who participate in the private sale and 1st Milsetone based tranch sale.

The Blockbird Contribution stages consists of two phases: Private sale and Milsetone based tranch sale. In each Milestone based tranch sale the unsold tokens are transferred to the next one, till the last one and then the remaining tokens will be burned. The tokens are sold based on Companies Milestone in 2019 (approx. 3 tranches). There is a fixed amount of tokens available during each stage.

Phase	Date	Token Allocation	Max Bonus	% Total Contibution
Private Sale (Stage 1)	May/Jun 2019	20 000 000 BBIRD	Defined at whitelisting	6.7%
Private Sale (Stage 2)	Jul/Sep 2019	36 000 000 BBIRD	Defined at whitelisting	12%
Private Sale (Stage 3)	Oct/Dec 2019	48 000 000 BBIRD	Defined at whitelisting	16%
Milestone 1 based tranch sales	Jan 2020	26 000 000 BBIRD	20%	8.7%
Milestone 2 based tranch sales	May 2020	25 000 000 BBIRD	5%	8.3%
Milestone 3 based tranch sales	Dec 2020	25 000 000 BBIRD	0%	8.3%

(The smart contract address will be publicly announced on the Blockbird™ official website https://blockbird.io)

The minimum amount of Ether that can be sent to the smart contract is 1000 Finney (1 Ether).

Early supporters, who have already shown an interest in participating in the crowdsale, will have the ability to register on the whitelist with their Ethereum addresses, giving them the possibility to participate in the first Contribution stage.
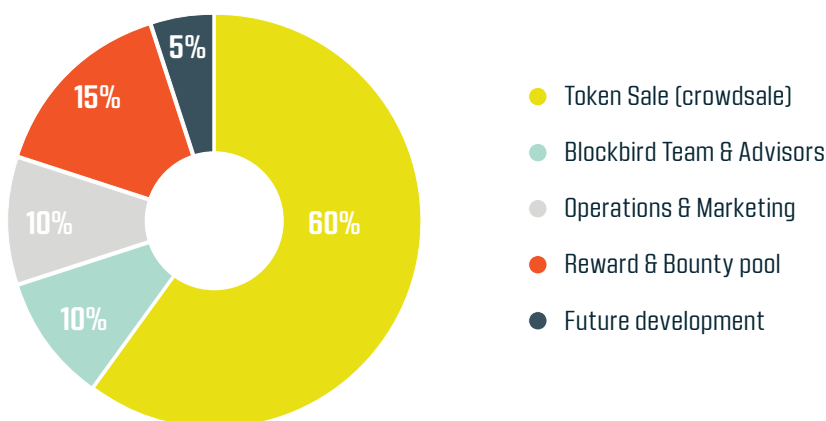
To participate in th Contribution stages, buyers must:

- have ETH (Ethereum) cryptocurrency,
- have an ETH wallet address (MetaMask, MyEtherWallet, etc.),
- finish the KYC procedure before purchasing the token (for more info, read below), and
- be a citizen of countries that are eligible for their citizens to participate in the token sale (more details in the Token Sale Terms and Conditions).

Before the Contribution stages begin an online registration form will be available for future token holders to register. Registering oneself is mandatory. Stringent regulations require us to verify identity for token holders (Know Your Customer). Please be wary of your local regulations. If in doubt, seek advice prior to contributing to the token sale. Once the KYC is concluded, the accepted contributors will receive proper notifications before the start of each Contribution stage.
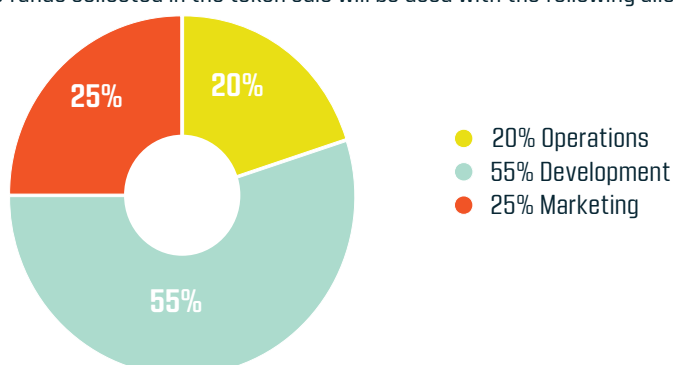
5.2. TOKEN DISTRIBUTION

- **CONTRIBUTION STAGES (PRIVATE AND MILESTONE BASED TRANCH SALES)**
  60% of tokens are reserved for the private sale and public Contribution stages.
- **BLOCKBIRD™ TEAM & ADVISORS**
  10% of tokens will be allocated to the team, early project believers, project ambassadors, and advisors. Tokens will be locked for a predefined number months after the internal distribution of allocated team tokens.
- **OPERATIONS & MARKETING**
  10% of tokens are allocated to the project development operations and support. This also includes the tasks that are connected to marketing and growth campaigns. Tokens will be locked for a predefined number months after the last Contribution stage (Milestone based tranch sale).
- **REWARD & BOUNTY POOL**
  15% of tokens are allocated to the reward system for the Blockbird™ platform and will be used for community engagement, reward, and contribution purposes. A portion will also be used for our bounty programs.
- **FUTURE DEVELOPMENT**
  5% of tokens will be reserved for future development. Tokens will be locked for a predefined number months after the last Contribution stage (Milestone based tranch sale).

- Token Sale (crowdsale)
- Blockbird Team & Advisors
- Operations & Marketing
- Reward & Bounty pool
- Future development

5.3. CONTRIBUTION STAGE FUNDING ALLOCATION

The funds collected in the token sale will be used with the following allocation:

- 20% Operations
- 55% Development
- 25% Marketing

6. ROADMAP / PLATFORM DEVELOPMENT STAGES

JUNE 2017	The initial idea was born
JULY–AUGUST 2017	Market analysis
SEPTEMBER 2017	Core team establishment
OCTOBER–NOVEMBER 2017	Platform idea development
OCTOBER 2017	Extended market analysis
NOVEMBER 2017–FEBRUARY 2018	MVP features development
DECEMBER 2017–JANUARY 2018	Business model development
DECEMBER 2017–JANUARY 2018	Core team expansion & onboarding of advisors
MARCH–SEPTEMBER 2018	Platform concept development (pre-alpha / alpha)
JULY 2018–SEPTEMBER 2018	Community engagement / Explainer-video / Landing page development
NOVEMBER - DECEMBER 2018	Onboarding new partners, community engagement, and in-depth marketing
Q4 2018 - Q1 2019	Blockchain smart contract testing / Alpha platform development (alpha dashboard, basic information blocks) / Community engagement
Q2 2019 - Q1 2020	Contribution stege preparations / Blockbird™ (beta) platform launch (first versions of dashboard, rating and reward system, BI with focus on visualization) / Blockbird™ Beta Sidechain development and testing / Smart contract auditing
Q3 2020	Blockbird™ (v.1) platform launch (dashboard, full rating, and reward system, BI functionalities)
Q1 2021	Blockbird™ (v.2) platform launch (first AI based functionalities)
Q3 2020 AND BEYOND	New release of Blockbird™ functionalities every 6 months (adding AI and text analytics functionalities, new information widgets, support for new languages etc.)

7. TEAM

ANDREJ ZUPAN — CHIEF EXECUTIVE OFFICER (CEO) in

Andrej Zupan has many years of experience in project management and leadership. After finishing his management studies, where he served as Vice-Dean of Student Affairs, he continued to work in the fields of IT Project Management and Business Process Optimization. There he acquired a background in Quality Management, Lean Production, and Process Improvement. Additionally, Andrej has a great deal of knowledge in IT System Development and Implementation. For the last 10 years he has been focusing on start-up founding, running, and consulting, during which he ran a gamification app start-up and consulted many others. Throughout his business endeavours, Andrej also developed several leadership skills, working with different teams developing new projects and newly-founded start-ups. The variety of skills, knowledge, and experience makes him a great choice for the Blockbird™ CEO.

MIHA MAČEK — CHIEF OPERATING OFFICER (COO) in

Miha Maček studied Business Management and started his professional path at the largest Slovenian insurance company, where he worked in the Human Resources sector for several years. He continued his professional journey at an international distribution company. He started his work as COO in the logistics department where he handled international transport and customer communication. Later he switched to a department where he was in charge of product development. Recently, after successfully achieving the company's goals, he was promoted to Business Manager. He is the head of the Purchasing and Sales Department, co-operating with many foreign suppliers.

GREGA ŠVABIČ — CO-FOUNDER & CHIEF BRAND OFFICER (CBO) in

Grega Švabič is a Brand Manager, Producer, and Production Sound Designer. In his line of work, he gained a lot of experience with various technology. With his organizational and brand-development experience, he handles team and product management, strategic analytics, and the cooperation between different sectors of the company.

KLEMEN METHANS — CO-FOUNDER & CHIEF INFORMATION OFFICER (CIO) in

Klemen Methans has a Master's degree in Organization and Management of Information Systems. His diverse skill sets add a vital contribution to our team. From system administration skills (virtualization, hardware, software, cloud, networking) and programming skills (Java, Html, blockchain) to organizational skills (managing workflows, teams, projects). His years in IT took him to all job levels – from IT maintenance, System administration, and IT engineering to the Head of an IT department. In recent years he devoted his private time to gathering knowledge on IT security systems and distributed ledger technologies, mostly blockchain and smart contract based projects.

PETER DJUKIĆ — CHIEF TECHNOLOGY OFFICER (CTO) in

Peter Djukic is a Computer Science graduate with more than 18 years of coding experience. He was a developer for RTV Slovenia, the National Bank of Slovenia, and other smaller businesses. He has experience in a variety of programming languages from Pascal, VisualBasic, PL/SQL, C#, JavaScript, and others. For the past 10 years his main focus has been the development of the internal customer management platform for the National Television of Slovenia (RTV Slovenija). His work included application development; working with a large DB; and sharing, communicating, and integrating data from various subjects – from banks to government institutions.

BOŠTJAN KOŽUH — CHIEF ANALYTICS OFFICER (CAO) in

Boštjan Kožuh is a BI/AI ninja with more than 15 years of relevant experience. He holds a Master's degree in Information Sciences and a Bachelor's degree in Economics. In his endeavours he continues to build on valuable experience he has gained from the perspectives of developing, implementing, and using business intelligence and analytics solutions. In his past roles he has headed and established Business Intelligence, Information Management, and Web Development departments at the Statistical Office of the Republic of Slovenia, global analytics vendor SAS, and one of the largest regional IT vendors, Adacta. Having held various roles and worked with clients across a range of industries including but not limited to the travel industry, insurance and banking, telecommunications, utilities, and the public sector. He is highly experienced in engaging with top management and senior executives and is able to progress programmes at various delivery phases with an expertise in Benefits Realization Management (BRM).

MAKS LEVSTEK – PUBLIC RELATIONS OFFICER (PRO) in

Maks Levstek is a law school graduate who worked in various positions across different job sectors. With experience in customer service, administration, marketing, manufacturing production, and content creation, he brings his versatility to our marketing team along with his crypto enthusiasm and investment experience.

ALIASH TEPINA – MEDIA PRODUCTION MANAGER (MPM) in

Aliash Tepina has a Bachelor of Arts degree from the Royal Central School of Speech and Drama in London. As an actor he has an active career, mostly on television, but also on the big screens. His most notable appearances include Christopher Nolan's "The Dark Knight Rises," "Silent Witness," and "Law & Order: UK" among various Slovenian films and TV shows. During his studies he started producing short video content, which later evolved into him becoming a producer – oriented mostly towards commercial content. He has produced TV commercials for many major Slovenian brands such as Pivovarna Union, Gorenje, Telekom, Cockta, and Mobitel.

UROŠ KUMER – CHIEF CUSTOMER OFFICER (CCO) in

Uroš Kumer has a degree in Political Science, but his career soon shifted, and now he has years of experience in Customer Relations and Quality Control Services. He started several companies across different industries where he was dealing with numerous customers – from high-profile clients in the Mega Yacht industry and later in the Yacht industry to a vast base of customers in the tourism sector. All of the mentioned industries demand a high level of professionalism and attention, which Uroš delivered and is still delivering with his ongoing projects/companies. For that reason, our community can be sure they will be served with a great deal of attention and promptness.

Check out our website blockbird.io to meet our advisors and partners.
You can find more information about the Blockbird™ token sale on our website
www.blockbird.io

DISCLAIMER

This document is the property of the Blockbird™ project.

All product and companies referenced in this document are used for research and information purposes only, and all referenced parties retain their respective intellectual property rights.

IMPORTANT NOTICE: Remember that contributing to Blockbird™ you agree to purchase BBIRD tokens that are functional utility tokens on the Blockbird™ platform. BBIRD tokens are not securities, are non-refundable and aren't for speculative investment. No promises of future performance or value are or will be made with respect to BBIRD tokens, including no promise of inherent value, no promise of continuing payments, and no guarantee that BBIRD will hold any particular value. BBIRD represents a proof of membership within the Blockbird™ platform, but they do not give the supporter any kind of share or equity in any Blockbird legal entities and ownership rights. The legal nature of the BBIRD token will be further described in "General Terms and Conditions."