**White Paper** 

Blockchain Powered Sports Media

English Language Version 2.2

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# Introduction

In their report, Nielsen notes that the sports media landscape is as fragmented as ever, with content being consumed from a wide variety of devices. While passionate fans are eager to engage with sports media from all angles, established media corporations are struggling to present their content in line with the rapid pace of technological advancement. In this respect, blockchain technology can take the sports media industry to a new level. We are excited to introduce an **innovative sports media platform with its own internal economy** based on free market principles – **Scorum**.

**Scorum** is a blockchain powered sports media that rewards its active users. Authors get rewarded for adding their publications, comments and photos while readers gain by casting their votes for quality content.

Scorum's economic model is based on principles that strive to ensure its cryptocurrency is supported with the real economy and the benefits are allocated fairly among all the system's participants.

The project team has already developed a working prototype of Scorum's statistical center, and our partners and industry experts made it possible for us to formulate an optimal product roadmap for the Scorum platform.

To finance further development of the platform and distribute tokens to future users, **Scorum** offers **Scorum Coins (SCR)** cryptocurrency **during the Token Crowdsale**.

# **Fundamental Principles**

## **Our Mission**

Our mission is **to jump-start the sports media evolution** and enable Scorum community members to be fairly rewarded for sharing their passion for sports. This concept stands in stark contrast with the way traditional media businesses operate.

Scorum is the first blockchain-powered sports media platform. We aim to firmly establish ourselves in this niche and ensure stable development of our platform. We estimate the potential global audience size for the Scorum platform to be 1 billion users aged 18 to 40.

To maximize audience engagement, maintain high content quality and establish an active sports enthusiast community, **Scorum** offers the following benefits:

- 1. A fair internal economic model based on blockchain technology.
- 2. Built-in instruments for authors (interactive visualization tools, photo database, advanced sports analytics).
- 3. Fully featured statistical centers for various sports.
- 4. Commission-free betting exchange.
- 5. In-house sports experts who ensure high quality of the sports analytics data.

Given the platform's unique value proposition, **Scorum** believes it has what it takes to become a cutting-edge media source at the heart of which lies **passion for sports**.

# **Functionality Overview**

Functionality-wise, **Scorum** is a **new-generation sports media source** that features:

- sports content optimised blogging platform
- statistics center with integrated services and live streams
- commission-free fantasy sports platform
- commission-free betting exchange

We've already developed the beta version of Scorum's statistics center; upon which we will base the functionality of other services within the platform, including the betting exchange and data visualization tools for bloggers.

The fantasy sports platform prototype is almost ready. Its users will finally be able to play for tokens.

At the moment, we are also developing special analytics tools for authors using the BI-based services already integrated into the statistics center.

Thanks to our decision to start product development with Scorum's statistics center, we have already received positive feedback about our platform from both sports enthusiasts and professionals.

In other words, our team at Scorum is well on its way to transforming these beta features into a fully functional platform. As we develop Scorum, we will continue focusing on the needs of the sports community as a whole as well as its specific segments.

Image 1 – Blogging platform home screen.

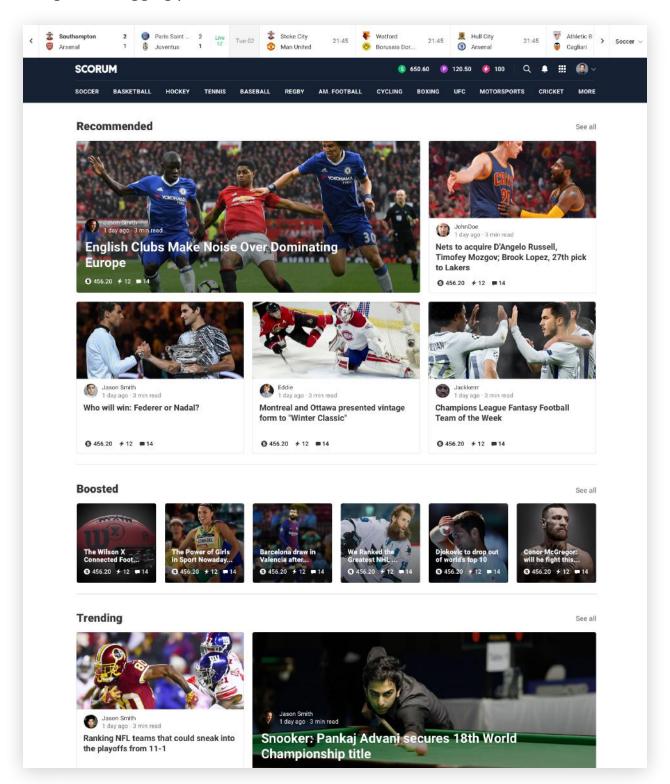
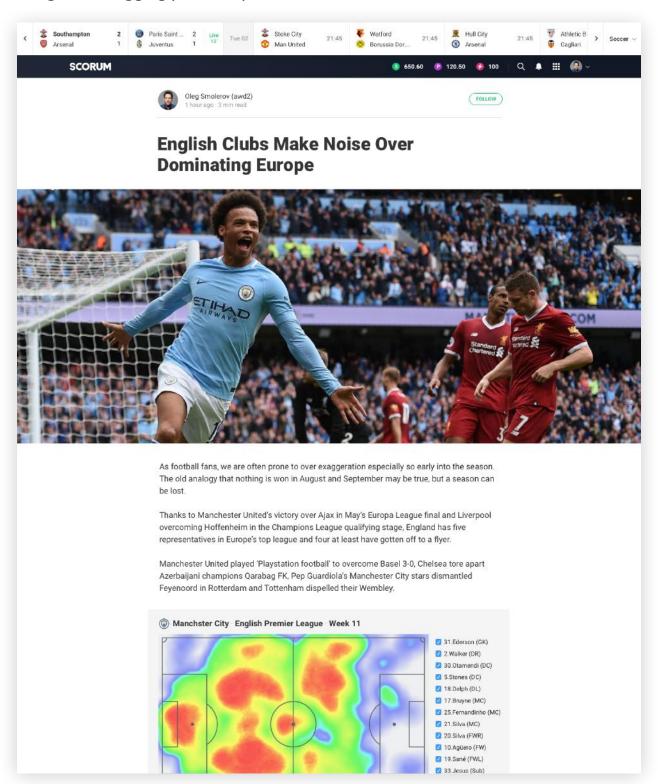


Image 2 – Blogging platform post.



## **Reward System**

By using Blockchain technology as the platform's foundation, we were able to create a transparent and reliable reward system for Scorum authors and active platform members.

To implement this functionality, we issue Scorum Coins (SCR) cryptocurrency and Scorum Power (SP) tokens.

## **Built-in Instruments for Authors**

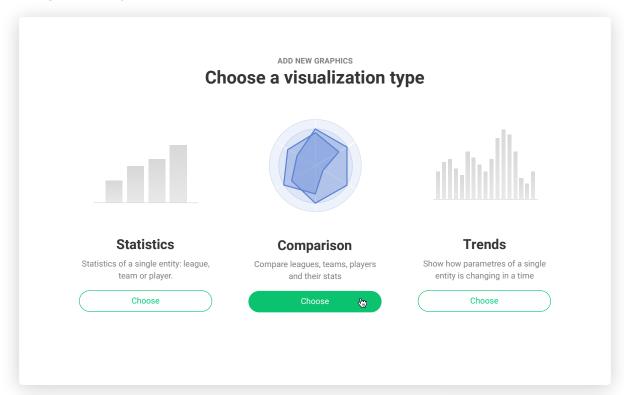
The **Scorum** blogging platform makes it easy for content creators to design engaging and visually appealing content, which in turn allows authors to focus their effort on writing quality publications about sports.

Aside from the simple yet feature-rich editing tools, we have developed **custom** solutions for sports writers:

- 1. Widgets displaying statistics center data which can be incorporated into publications with just a few clicks.
- 2. Built-in photo database where authors can get quality images for their publications.
- 3. Sports analytics tools which allow content creators to quickly create interactive data visuals.

We are developing **Scorum**'s features with the focus on sports media audience interests which allows us to preserve the platform's ease of use while maintaining its high level of functionality.

Image 3, 4 – Sports Editorial Tools.





## **Statistics Center**

The statistics center provides users with information about various kinds of sports as well as match results, statistical data, player and team profiles, and live match broadcasts. Users will also be able to purchase sporting goods and services like event tickets from our partners.

For authors the statistics center offers a **new generation of sports analytics tools** that enable content writers to create interactive visuals with the help of the center's built-in BI services. **Services** such as forecasting system, sports texts analysis, sports chat bots and more will also be available within the statistics center.

Within Scorum's partner programs we have already integrated Microsoft's Power BI and are planning to add similar services from Google and IBM in the future.

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Image 5 - Statistics center calendar.

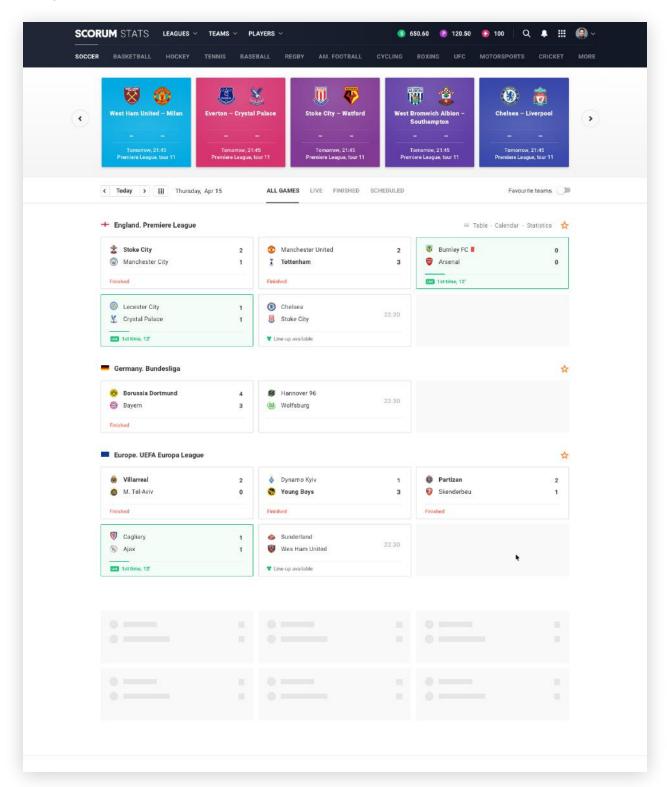


Image 6 – Match page.

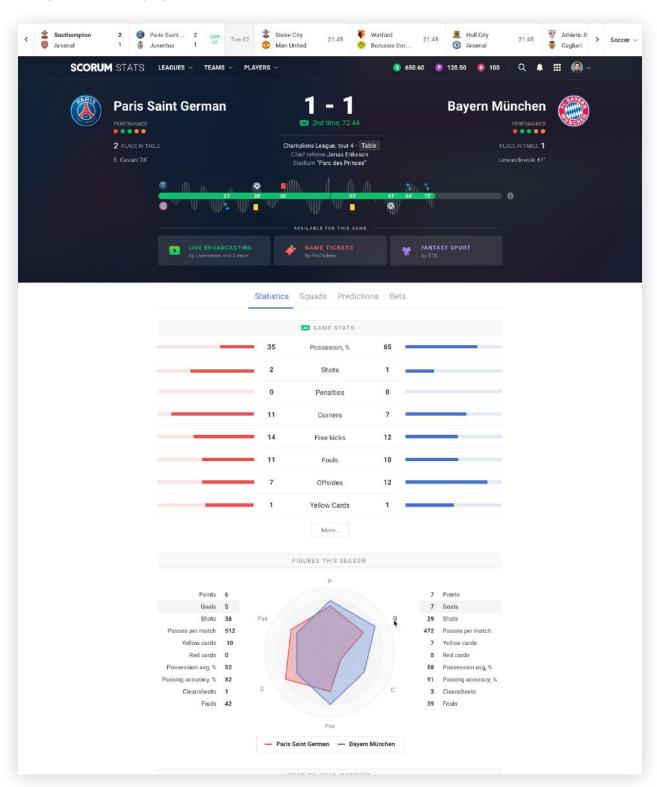


Image 7 – Team page.

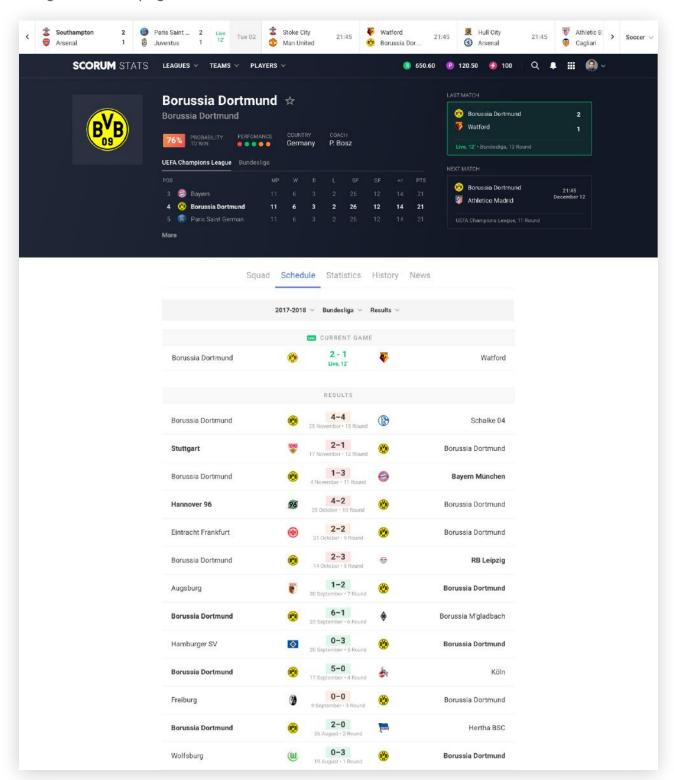
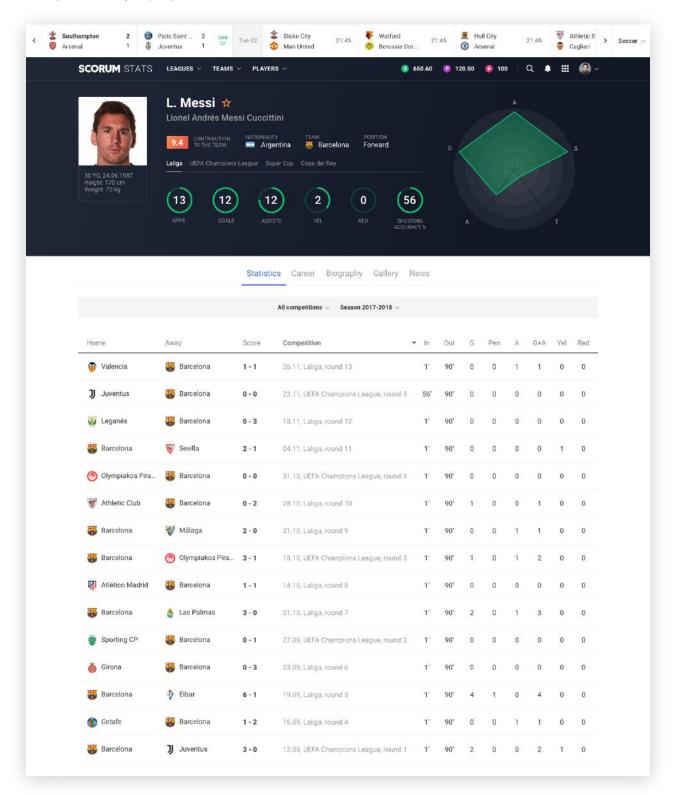


Image 8 – Player page.



## **Fantasy Sports Integration**

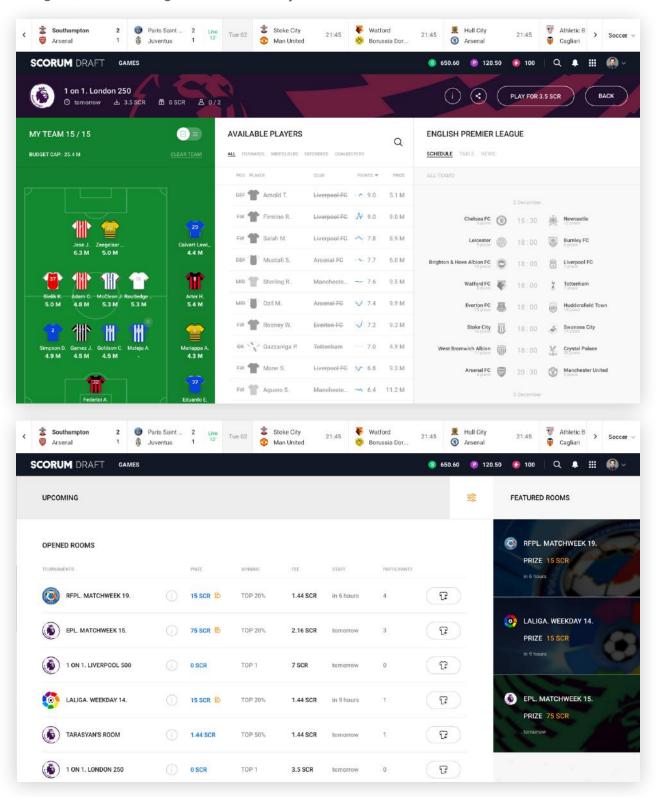
The Scorum platform is excited to offer commission-free fantasy sports league integration within the project.

As FSAT <u>estimates</u> that, in the US and Canada this year one in five people actively took part in fantasy sports for a total of almost 60 million participants. This is up from 32 million in 2010 with participation data showing consistent growth year over year since 2003.

Of these players, over one-third were teenagers and the average age of fantasy sports participants is 38 years old. Players over the age of 18 spend an average of \$556 dollars per year to participate in fantasy sports.

All of this interest in fantasy sports competition drives further engagement with sports media with nearly two-thirds of fantasy players saying that they watch more live sports and read more sports coverage as a result of their participation in fantasy leagues.

Image 9, 10 – Gaming Room and Lobby.



## **Commission-free Betting Exchange**

Scorum's commission-free sports betting exchange is fully capable of potentially replacing traditional betting platforms. Within Scorum, users can quickly and easily bet against each other without having to pay any commission or extra fees.

It's worth noting that the betting exchange **is not a source of income** for the Scorum platform and acts solely as a marketing tool. Furthermore, Scorum provides the betting exchange for entertainment value only as a game of skill for it users. The betting exchange shall not be accessible in jurisdictions where it may be prohibited or require further licensing under such jurisdiction's online gambling laws. Based on data cited by the BBC, the potential market volume for the cryptocurrency sports betting market exceeds 1 trillion USD.

Due to the uncertain state of regulation on a global scale in the field of virtual token betting, we cannot guarantee the legality of Scorum betting exchange platform or ability to structure and license our future betting exchange platform in any given jurisdiction. However, we strive to be a responsive and compliant company should we face any regulatory inquiry.

# **Basics of Scorum Economic Model**

Scorum's economic model is based on the following principles:

- 1. Cryptocurrency needs to be supported by the real economy.
- 2. All the active participants must benefit.
- 3. Income distribution should be objective and fair and controlled by the user community.

At the moment, there are three planned stable revenue sources:

- 1. **Internal pay-per-click advertising**. Content authors will be able to use it to promote the content they create.
- 2. **Partner programs**. Within the platform, users will be able to buy various sports products from our partners:
  - Live broadcasts of sporting events.
  - Event tickets.
  - Sports merchandise.
  - Other sporting goods.

These sporting goods and services will be sold at a discount when purchased with Scorum Coins instead of other currencies.

3. **Photo database**. Authors will be able to use photos for their publications from the large built-in photo database. 10% of the photo's value goes to Scorum.

To learn more about income distribution at Scorum, please read the "SCR Distribution from Scorum Revenue" section.

The mathematical payout allocation and distribution model is available on Google Sheets.

# **Scorum Tokens**

To ensure proper functioning of the Scorum economy, we are issuing the Scorum Coins (SCR) cryptocurrency and the Scorum Power (SP) internal token.

**Scorum Coin (SCR)** is planned to operate on the Scorum platform. It can also be transferred to other users. These are the tokens that will be available for purchase during the Token Crowdsale.

**Scorum Power (SP)** is an internal token that needed to enable technical interactions between the system's users. SP value is directly proportional at 1:1 ratio to SCR.

#### **Using Scorum Coins**

SCR may be used within the Scorum platform in the following ways:

- SCR owners can purchase partner products and services using SCR (see the "Basics of Scorum Economic Model" section).
- 2. SCR can be used to pay for in-platform ads (see the "Basics of Scorum Economic Model" section).

- 3. SCR can be used at the integrated commission-free sport betting exchange.
  - According to data cited by the BBC, the size of the fiat sports betting market reached the 1 trillion USD mark 4 years ago. It is difficult to obtain more accurate data because of the large number of market players and its non-transparent economy. However large its size today, it is plausible to assume that all the fiat money of the sports betting industry will migrate into commission-free solutions which can only be implemented using blockchain technology. Scorum is aiming to dominate this market niche.
- 4. SCR can be purchased on the Scorum website. To ensure that buying SCR is quick and easy, our platform will function as an intermediary between users and cryptocurrency exchanges. The option to buy SCR on the Scorum website will provide an additional revenue stream for Scorum and will have a positive effect on SCR usability.

### **Using Scorum Power**

SP tokens can only be used inside the Scorum platform. They are needed to ensure technical interactions between system users and to allocate rewards to users including the Bounty Program rewards.

Owning SP has the following advantages:

- The more SP, the higher the probability to get the delegate status and have an impact on Scorum's project development.
- The more SP, the more influence the user's opinion has within the project (Voting Power).
- The more SP, the larger the share in the reward pool for owning SP.

Users can get Scorum Power for registering on the platform as well as creating content, voting and signing blocks.

For more information about ways to get SP, please see the "SP Emission and Distribution" section.

In order to prevent SP's entering the exchanges and to protect the system's integrity, it will not be possible to transfer SP between users.

Therefore, only SCR tokens will be available at the exchanges (see "SCR > SP > SCR Conversion" section)

#### SCR > SP > SCR Conversion

At the Scorum platform, the SCR-to-SP exchange happens immediately.

It is also possible to exchange **SP into SCR** in equal shares within 12 months after conversion process activation (this time frame can later be changed by the delegates). This measure is aimed at protecting token holders' interests.

SP > SCR conversion will be available only after adding the internal advertising into the platform. This measure is aimed at supporting the SCR exchange rate by increasing the demand for the tokens from the side of advertisers.

## **SCR Emission and Distribution**

To finance further development of the platform, **Scorum** is issuing Scorum Coins (SCR) cryptocurrency and putting it up for sale to token purchasers during the Token Crowdsale. A finite amount of SCR and SP tokens will be issued.

Scorum Coins cryptocurrency totalling **20M** is created and sold as part of the Token Crowdsale:

- 18.6M SCR are put on sale and used for creation and development of the Scorum project.
- 930K SCR are distributed as part of Token Crowdsale Affiliate Program.
- 470K SCR are distributed on a long-term basis among Scorum team as incentive bonuses.

Afterwards, SCR can be produced only by means of SP > SCR conversion. All the SCR tokens unsold during Token Crowdsale will be converted into SP. Throughout the year, all the received tokens will be converted into SCR, sold at the exchange and used for Scorum product development.

### **Token Crowdsale Summary**

#### **Token distribution**

**20M SCR** are distributed during the Token Crowdsale in the following stages:

- 1. 1 600 000 SCR at a rate of 1 SCR = 0.5 USD (fiat currency equivalents here and throughout are provided for informational purposes only; no fiat currency will be accepted in the Token Crowdsale). Total for 800K USD 50% discount from nominal value.
- 2. 2 000 000 SCR at a rate of 1 SCR = 0.75 USD. Total for 1.5M USD -25% discount from nominal value.
- 3 000 000 SCR at a rate of 1 SCR = 0.9 USD. Total for 2.7M USD 10% discount from nominal value.
- 4. **12 000 000 SCR** at a rate of **1 SCR = 1 USD**. Total for **12M USD nominal value**.

#### **Funds allocation**

1. 65% of the raised funds go towards the development. Most of the functions of Scorum will be implemented within the first year, but they will require continued refinement and development as the platform grows in popularity and expands to cover all major sports. Much of the initial development funds will be spent on establishing contracts with statistics providers so that our statistics center have the latest in-depth sports data for Scorum users to access.

Integrating and expanding Scorum as a competitor in the US sports media industry will require significant funds to tailor the design of the platform to fit the needs and interests of each unique fan community.

2. 20% will be dedicated to marketing. As a direct way to get connected to the widest audience of sports fans, Scorum will use professional athlete promotion of the project through its ambassador program.

Scorum's blogging platform will provide a direct connection from athletes to their supporters and the partner programs will give the fans exclusive deals to buy merchandise endorsed by their favorite athletes.

Scorum ambassadors will make use of a variety of promotional strategies to incentivize fan participation in Scorum including:

- Autographed jersey and merchandise giveaways
- Event ticket lotteries with a chance to meet and chat with Scorum ambassadors
- Live online chats with athletes through Scorum's platform
- Personal blog posts and updates on Scorum

- Active users and fans will get to meet and greet ambassadors at Scorum Fest and other regional meet-ups.
- 3. **15%** is set aside for legal support, as the international and local regulations around cryptocurrency based projects are in an ever state of change.

For local and European regulatory advice, we rely on Revera, a top business law firm with 18 years of experience working with over 3000 international clients.

We also cooperated with Velton-Zegelman PC, based in San Francisco. Their firm has years of experience guiding tech start-ups to navigate the international regulation of blockchain and cryptocurrency. Julian Zegelman, partner of the company, has also entered our advisory board.

According to the Velton-Zegelman PC resolution, Scorum's liquid cryptocurrency has met the requirements of a utility token according to the Howey test.

#### **Scorum Team Incentive Program**

**470K SCR** are emitted in order to motivate the employees of the company. These tokens will be paid as bonuses in addition to salaries until the allocated sum is fully paid out.

#### **Token Crowdsale Affiliate Program**

**930K SCR** are available for affiliates who help attract token purchasers for the Token Crowdsale.

Every affiliate that participates in the program has its unique referral code (the link with the code is available in users' personal account on the Scorum Token Crowdsale website) which can be used to track Scorum Coins buyers. The

affiliate will receive 5% SCR based on the amount of SCR their referral links generate.

For example, an affiliate placed the link on social networks. A certain number of token purchasers went via this link to buy 1000 SCR. Thus the affiliate will get 50 SCR.

Tokens not distributed via this program will be destroyed.

# SP Emission and Distribution: 10M Bounty Program

Scorum Power Tokens will be emitted in the course of user registration. A **maximum of 10M SP** will be issued. The nominal value of 1 SP = 1 SCR = 1 USD. Scorum Power tokens will be distributed as part of the Bounty program.

Scorum Power Distribution:

- 2.1M SP— registration bonuses
- 3.84M SP bonuses for voting and commenting
- 3M SP to founders
- **0.1M SP** to Steemit users
- **0.48M SP** to witnesses (users signing blocks)
- **0.48M SP** to active SP holders

As all the **rewards from the bounty program are paid in SP tokens**, the conversion of which into SCR will be delayed, new SCR are expected to appear on

the market in small quantities and will be directly dependent on project's popularity.

The system is secured against **falsified registrations** and other attacks thanks to the following mechanisms:

- 1. Gradual SP burning in case of user inactivity.
- 2. Delayed SP > SCR conversion.

### **Registration Reward Pool**

Amount: 2.1M SP

SP rewards for registration will be allocated in 4 stages. At each stage, the quantity of tokens issued per person will decrease.

Distribution of registration rewards.

Stage	Users, thousand	Registration bonus, SP	Stage total, K SP
1	100	5	500
2	200	3	600
3	300	2	600
4	400	1	400

After six months of inactivity, the SP given to a user for registration will expire.

### **Activity Reward Pool**

Amount: 3.84M SP

The activity reward pool gets replenished with each registration on the Scorum website. Each new registration results in the pool getting replenished in equal sums within 100 days.

For example, during the first stage when new users get registered, the process of pool replenishment begins at 0.0914 SP per user per day for 100 days, which is equal to 9.14 SP in total. Going forward, the pools collected in this manner are distributed among users that were active on the website (submitted publications, commented, voted, etc.).

SP activity reward pool distribution.

Stage	Users, thousands	Stage payouts, K	Stage payouts per person
1	100	914,29	9,14
2	200	1097,14	5,49
3	300	1097,14	3,66
4	400	731,43	1,83

#### **Witness Reward Pool**

Amount: 0.48M SP

Distributed between witnesses (delegates signing blocks).

#### **Founders Reward Pool**

**Amount: 3M SP** 

Distributed between Scorum founders at their discretion.

#### **Steemit Users Reward Pool**

Amount: 0.1M SP

Distributed among Steemit users.

We support the audience that is already familiar with a project similar to Scorum and have therefore created a special pool for Steemit users. A Blockchain snapshot will be taken when the Scorum Coins crowdsale is finished. Data will be recorded here. SP tokens from our Steemit bounty program will be distributed equally among Steemit users who participate, with 2x bonus for the first hundred entrants, in the bounty. SP tokens are paid to a public Steem address which can be activated by using personal Steem key.

#### **Active SP owners**

Amount: 0.48M SP

Distributed between active SP owners, users whose Voting Power is less than 100%.

# SCR Distribution from Scorum Revenue

SCR tokens are distributed from Scorum revenue according to the following principles:

- 1. Internal advertising.
  - a. 50% of revenue is distributed in SCR among users.
    - i. 40% goes to SCR activity reward pool.
      - **30%** goes toward rewarding content creators.
      - 10% goes to voting users.
    - **ii. 5**% is paid out to active SP owners (i.e., SP owners, who actively participate in voting as measured by having less than 100% VP) in proportion to their SP account balance.
    - iii. 5% is distributed among witnesses (users who sign blocks).
  - **b. 50**% of the revenue goes to support and develop the product, namely, towards the company's R&D center.
- Partner programs. Scorum will offer a discount to all users who choose to make payments within the platform using SCR. The discount amount will depend on conditions negotiated with Scorum partners.
- 3. Photo database. **80**% of the photo's value will go to its author. **10**% goes to the photographer reward pool and the remaining **10**% goes to Scorum.

## **SCR Activity Reward Pool**

Scorum rewards its active users for creating and engaging with platform content. 40% of Scorum's advertising revenue go to SCR activity reward pool. This amount is distributed among authors of publications and readers who evaluate content by voting for it. Each user can cast their vote for publications and comments on Scorum's blogging platform as well as vote for comments within the statistical center.

# **Voting Power (VP)**

Each user has a dynamic parameter **Voting Power (VP)** which gets spent during voting and gets fully **recovered within 120 hours (5 days)**. The maximum VP value is equal to the user's current amount of SP.

With each vote, **up to 5**% of the remaining Voting Power is spent. The more often the user votes, the less power each vote has as VP does not have enough time to recover.

The more VP a post or a comment gets, the higher the payout, which is distributed between the post's author, commentary creator, photographer as well as the users who voted for it.

Reward distribution depends on the following factors:

- 1. **VP of the voter that is given for the post**. The more VP given for a post, the higher the payout.
- 2. **Sequence**. Users that voted earlier get paid at a higher payout rate.
- 3. Time from the moment of publication.
  - The later the voting happens, the smaller the payout.

In order to protect the system from spam voting, we implement the following system: during the first 30 minutes after publishing a post or a comment, a portion of the voters' rewards goes to the content creator. If a vote or comment comes within the first minute of content publication, 100% of rewards will go to the author. This percentage will gradually go down to 0% by the 30th minute.

For example, if a vote comes in on the 15th minute after publishing, 50% of the rewards will go to the post's author. If users consider the post trendy and valuable, they should share a portion of their earnings and cast their vote earlier in order to keep their VP high.

## **Publication Statuses**

Scorum publications are categorized into three statuses:

- New. No one has voted for a publication and no more than 12 hours have passed from the moment of its creation. Publication does not get any rewards.
- 2. **Active**. From the moment the first vote has been cast, the post will remain active for 7 days and receives payouts from the SP and SCR activity reward pools.
- 3. **Archive**. If a publication has not received any votes for 12 hours, OR if 7 days have passed since the moment of its activation, the publication moves into an inactive state and does not participate in the reward distribution.

Each user gives a part of their Voting Power at the moment of voting. During its active state, a post accrues Voting Power and participates in the reward allocation process from the SCR activity reward pool. The tokens from pools are distributed once per minute. The more Voting Power a post gets, the bigger its

reward share which gets distributed from the SCR activity reward pool. Only active posts participate in the reward distribution process.

# **Activity Reward Distribution**

At Scorum, users get rewarded for being active on the platform: from post authors to commenters to users who cast their votes for posts.

The special feature in the comment reward system at Scorum is that 50% of commenting rewards for posts goes to the original post or comment. This way authors of interesting content get extra rewards if their post spurs lively discussions. This commenting reward hierarchy is preserved up to the 6th level.

Scorum has developed an **analogous reward system for comments left for entities within the statistics center** (players, judges, coaches, clubs, leagues
etc.). Comment authors get rewarded as well as all the verified entities within the
statistics center. It's important to note that Scorum will administer payouts only
to verified entities in the statistics center. If an entity is not verified, the tokens are
kept on their accounts until the verification process is complete. Such system
allows Scorum to involve sports industry professionals in the project.

#### Publication author gets:

- 75% from the publication payout sum.
- **50%** from the payout sum allocated for all authors of comments of the 1st level.
- 25% from the payout sum allocated for all authors of comments of the 2nd level.
- And so forth until the comments of the 6th level inclusive.

#### **Comment author gets:**

- **75%** from the comment payout sum.
- 50% from the payout sum for all the comments of the 1st level.
- 25% from the payout sum for all the comments of the 2nd level.
- And so forth until the comments of the 6th level inclusive.

#### Statistical center entity gets:

- **50%** from the payout sum for all the comments of the 1st level.
- 25% from the payout sum for all the comments of the 2nd level.
- And so forth until the comments of the 6th level inclusive.

#### User who voted gets:

• **25**% of the payout for the publication/comment distributed among all the users who voted for it.

# **Photographers Reward Pool**

The photographer reward pool is continuously replenished with SCR in accordance with the Scorum Revenue Distribution mechanism. The pool's resources are distributed monthly among authors of the photographs that were used in publications and/or comments. The success (in Voting Power) of the publication or comment also plays a role. Authors can put their best pictures in separate posts and participate in their promotion, thereby influencing the reward distribution in two reward pools: for submitting a photograph and for activity as an author of the publication.

# **Product Roadmap**

Different structural parts of the project are currently at various stages of completion. Both user and technical tests of the features already developed are going well, and we have firm plans to launch a partially limited Scorum version in the beginning of 2018 with the blogging platform and the reward system added on and ready to use. At the initial stages of Scorum's existence, we have determined the two strategic markets for our product to be Europe and North America.

Using the already developed statistics center for soccer as a reference, we will be gradually rolling out support for all popular sports from around the globe.

**December 2017:** Fantasy sports platform prototype

March 2018: Blockchain and online wallet launch

**April 2018:** Fantasy sports platform with SCR integration

**May 2018:** The Scorum blogging platform featuring its integrated reward distribution system goes live. Microsoft's Power BI integration goes public.

**June 2018:** The betting exchange will open so that users can bet against each without commission.

**July 2018:** The advertising system will be implemented with 40% of ad revenue directed to the SCR Activity Reward pool.

**September 2018:** Sports data visualizations for the blogging platform will go live with integrated photo database MVP.

**October 2018:** We'll add the most popular USA sports leagues to the statistical center.

# **Technical Overview**

There are three technical blockchain components that make up the Scorum sports media platform: the blockchain protocol, Web infrastructure and data analytics services.

## **Blockchain Protocol**

The blockchain protocol is the most essential part of the Scorum project. Any public blockchain must contain economic stimuli aimed at rewarding those project participants that support the protocol as well as penalties for those who try to compromise it.

Because of the the technical complexity of modeling and development of the unique economic system of the Scorum blockchain protocol, we have decided to rely on ready-made solutions whenever possible. Many of the technical components of blockchain models similar to Scorum have already been developed and successfully used in other projects. We have picked what we believe to be the best blockchain solutions available and applied them to the development of Scorum.

The Graphene framework is used to develop the blockchain protocol for Scorum. This solution has already proved itself both reliable and highly capable in such successful blockchain projects as Bitshares, Steemit, and Golos.

The Scorum blockchain uses the **DPoS** (**Delegated Proof-of-Stake**) consensus algorithm. The key advantage of this algorithm is its high-traffic network capacity of up to 10 000 transactions per second. Such performance is made possible thanks to a combination of several factors:

- 1. The schedule for the nodes signing blocks is known ahead of time.
- 2. Effective transaction processing in each node.
- 3. All data necessary for validating transactions is stored in the memory.

At Scorum blockchain, production of new blocks is made by **delegates** and takes place according to the schedule made for the following round. The schedule for each round is made according to the protocol. More specifically, 21 delegates are chosen who will be signing the blocks. 20 of them are chosen according to user votes. 1 of them is selected from the delegate queue; the delegate with the largest number of Scorum Power tokens gets chosen for the upcoming block signing round. Each user can participate in block signing thereby playing an active role in the decision making process of what type of information becomes part of the Scorum blockchain.

In order to make it to the list of **21 delegates** chosen to sign blocks for the following round, a user needs to either become one of the top 20 most popular candidates according to user votes OR buy a sufficient amount of Scorum Power and wait for their turn in the queue among all the remaining candidates that didn't make it to the top-20 list.

Block production synchronization among **delegates** (witnesses) is carried out according to the **NTP protocol** which is being used successfully in other blockchain systems (Bitshares, Steemit and Golos).

In order to provide users with an opportunity to perform transactions within the Scorum blockchain network without having to spend their resources, we came up with the free transaction model for the platform which is made possible by the system dynamically calculating bandwidth capacity of each user.

**Blockchain protocol** is a set of technology solutions responsible for both development and proper execution of user interaction protocol inside a

specialized p2p network. Blockchain also develops protocol rules and makes sure they are executed by a client supporting the protocol. In this case, the **client** is a cross-platform application with an open source code publicly available for analysis and use by any interested parties.

To make the Scorum blockchain deployment process more convenient, we provide each new protocol version as a Docker image which allows us to avoid the peculiarities of various operating systems and environments. This in turn allows our users to easily utilize the client, which is especially important for delegates who need to keep the nodes active within the network in order to take part in block production rounds. These Docker images of public nodes are also deeply integrated into the system of continuous Web infrastructure expansion of the Scorum platform.

## **Web Infrastructure**

A console application is sufficient for interacting with the blockchain Scorum node. However, manual formatting and sending of the transaction in accordance with the protocol is far from user-friendly. That's why developing a **convenient** and secure user interface is one of our key development objectives.

To allow for seamless and quick access to Scorum web interface, we will create a cluster of various containers within the **Windows Azure** cloud.

- We use Azure Container Service to expand, support and orchestrate the Docker-container cluster with Scorum blockchain nodes. This highly reliable solution allows us to ensure availability even during peak load times as well as flexibly scale the cluster depending on incoming request volume.
- Azure Search allows Scorum users to effectively search through the content found on Scorum blockchain. To do this, we keep an eye on all the notes located in the blockchain and create indexes for them in Azure Search. Such

indexing allows us to provide users with the most relevant search results considering such criteria as user language and variability of the searched phrase.

 We use Azure Content Delivery Network to allow users to load pages immediately, regardless of where they are in the world.

# Justification for The Models Used

Two fully functional products built using Blockchain technology, Steemit and Golos, with the blogging components analogous to Scorum, have already demonstrated their market success.

According to CoinMarketCap, as of September, 2017, Steem is one of the top 20 largest cryptocurrencies with market capitalization reaching **\$315M USD**. While Golos, in its turn, is a successful localized version of Steemit demonstrating dynamic growth.

We have taken certain elements from these projects and applied them to Scorum. Namely:

- 1. The general idea of income distribution among users.
- 2. A fair payout distribution model.
- 3. Technical components of the platform, particularly the DPoS consensus.

At the same time, we have significantly improved and adapted the above models to the needs of the sports industry and have greatly enhanced the economic component of the platform:

- Introducing advertising inside the platform. Striving to create a sustainable
  ecosystem at Scorum, we have introduced an option to purchase advertising
  in SCR with prices starting at lower rate than the market average. This
  measure is aimed at protecting the SCR exchange rate from volatility.
- 2. Additional opportunities to use SCR which is expected to help further increase token value.
- 3. Finite SCR and SP emission which increases SCR value.
- Economically viable existence of the R&D center which is supported by stable sources of income (see the "Basics of Scorum Economic Model" for details).
- Operating costs to support the Scorum ecosystem are substantially decreased as the R&D center is located in Minsk, Belarus, where it is possible to create technology products of the highest quality at low prices.

# Reasons to Participate in the Scorum Token Crowdsale

Compared to traditional sports media, the Scorum project offers sports fans a multitude of benefits. Our unique value proposition will lead to large sports audiences choosing our platform over the established media, which is expected to result in quick Scorum tokens distribution. In turn, the economy of the Scorum project is based on a stable monetization system which gives SCR real value.

Here are the defining factors that make SCR cryptocurrency attractive to token purchasers:

1. Favorable conditions to forecast SCR value and utility.

- Extensive sports betting market. According to data cited by the BBC, the fiat betting market is valued at 1 trillion USD. This money is allocated among traditional sports betting platforms where commission fees can be as high as 10%. We can assume that users will migrate away from traditional venues and towards commission-free projects. Thanks to blockchain technology, Scorum allows its users to make commission-free bets.
- After launching CPC advertising system nominal value of one click on the Scorum platform will be 0.01 USD, whereas other traffic providers charge as much as 50 USD per click (the data can be verified via Google Adwords). This will significantly increase the platform's attractiveness for advertisers and leads to an increased demand for SCR.
- Discounts for our partners' sporting goods and services offered to those users who choose to pay for them in SCR, which further increases the demand for SCR tokens.
- 2. According to 2016 estimates by the University of Cambridge, the number of cryptocurrency holders had reached 5.8M. However high the number may be today, Scorum has potential to expand cryptocurrency user audience up to 1 billion people by providing inherent advantages for its users:
  - Users can easily enjoy taking part in Scorum's cryptocurrency economy which rewards their everyday interests with tangible and straightforward benefits.
  - Minimal barriers to entry: user becomes Scorum Power owner right after registering at Scorum.

# **Conclusion**

Thanks to the blockchain technology and a stable internal economy, Scorum creates a favorable system to satisfy sports enthusiasts' and professionals' key needs. All this makes the project attractive for both users and token purchasers.

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