GLOBEX SCI

White Paper

CELLCHAIN LTD

$250 billion worth scientific knowledge is now available to anyone.

An ecosystem that stores and allows to use data arrays of scholarly articles and publications in blockchain.

«We are a „big brain", which stores and distributes scientific knowledge through a chain of blocks containing information. Blockchain will change the very idea of academic heritage making it more protected and open to general use.

Project Mission

In our world of enormous information flow thousands of scientists are still unaware of their colleagues' work. Our mission is to create a strong link between scientists all over the world and to provide them with a platform for the exchange of scientific knowledge from all sorts of fields.

We believe that strength lies in unity, hence, collective knowledge promotes new discoveries for the sake of humanity.

Project Idea. Why do we need it?

Globex SCI will simplify the exchange of academic literature, research results, scholarly manuscripts and will also provide a mechanism of monetary compensation for authors based on the rating by the number of downloads.

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ABOUT GLOBEX SCI

The project addresses difficulties that scientists, authors of scholarly articles, publishers and universities face:

- After buying an access to the platform, a user can read all journals published on the platform and get a payment for her articles.
- The platform will ensure by means of cryptography that the content is protected and authors get the reward for people downloading their papers.
- Exchanging data through an aggregator will allow to diversify the content of journals and save money on subscriptions.
- The profit will be distributed fairly between a publisher and an author.

Target Audience

- Authors of scholarly articles, academic journals
- Scientists, users
- Representatives of universities and research centres

Market Analysis

We have conducted a survey among the target group of the project to identify the problems faced by scientists, authors of scientific articles and their readers.

Communication means – forums, Facebook, paid services.
Number of respondents – 174.

Conclusions

The results of the survey show that the target audience faces the problem of getting and exchanging knowledge on a regular basis.

Users from different countries are mostly interested in a high-quality content, for which they are willing to pay from $70 to $100 a month.

Russian scientists are especially concerned with lack of information. We came to the conclusion that the reason is web illiteracy, lack of money and of translations of other open source materials to Russian.

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Competitors

Storj

Storj is a distributed decentralized open-source cloud storage platform, based on the use of the Bitcoin transactions register and its own peer-to-peer protocols. The platform also functions as a payment system, which uses its own crypto currency – StorjcoinX (SJCX), working on the Counterparty protocol. The developers conducted a crowdsale of 500 million SJCX, which, however, was unsuccessful: Storj did not get even the 10% of the desired 9800 BTC.

Storj is not the first project aimed at implementing the idea of a decentralized, secure and anonymous cloud storage that allows to run full-fledged web applications. It is to some extent a competitor to Ethereum, Maidsafe, Permacoin and some other projects that are also working on this promising idea, but have not yet achieved its full implementation.

BCDiploma

BCDiploma is an application for universities, which allows them to certify degrees using Ethereum. The graduate will be able to prove the authenticity of her diploma just by providing an URL.
According to the developers, BCD will have an inexpensive, high-speed, open source ecosystem designed to deploy registries on Ethereum while respecting the right to personal data.

The creators believe that the advantage of the project is as follows: an owner places a legal object on the platform, and the right to this object is ascribed to her almost instantly. The project will be created as a decentralized infrastructure that will allow to explicitly identify authorship and access content.
The platform will have several functions such as copyright attribution, depositing of objects, search system and a gratuitous and (or) conditionally free exchange of objects between students, teachers and researchers working in leading universities.

Conclusion

There are only indirect and inexplicit competitors in the market. However, their presence shows the relevance of the issue and the activity in the market.

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Problems

There are some trivial economic problems getting in the way of synergetic science development:

- Restricted access to published articlesCaused by an absurd pricing system for specialized scientific publications, which uses package subscriptions, as a result, user pays a lot of money for unnecessary information.
- Unfair distribution of profit from publication between a publisher and an authorNowadays, while authors of content receive a substantial reward for their work (music, journalism, blogging and other intellectual creative spheres), in science an author has to pay for the publication of articles. Not only an author does not receive income from the results of his intellectual activity, but also suffers losses.
- llegal distribution of publications in free access without authors' compensation. Piracy is a logical consequence of the problems listed above. The current system of interactions between authors and publishers lacks flexibility and common sense, therefore, it cannot offer a viable alternative to illegal distribution. The scale of the problem is impressive: one of the well-known portals Sci-Hub provides a free access to over 25 million articles. And despite multi-million claims, authors of publications in any case will be left out.

Market troubles

- Those wishing to receive new scientific information are forced to subscribe to the leading paid journals
- Dependence of scientists on the magazines "Open access" and the compulsion to engage in piracy
- Magazines suffer from piracy (piracy resource sci-hub has already posted more than 20 million articles)
- Scientists bear a serious financial burden due to spending on subscriptions to all new and new magazines.

Platform Benefits and Problem Solving

Globex SCI ecosystem will solve all the above-mentioned problems in the most preferable way considering the distribution of information, allowing to predetermine scientific breakthroughs in the future using artificial intelligence and knowledge database.

For publishers

- As a legal body, the platform will purchase subscriptions to a number of leading publishers and will distribute it among its members in the blockchain.

- Publishers will get deductions from each access to an article stored on the Globex SCI platform.

For universities / research companies

- Organizations that pay for subscription sign an agreement on non-disclosure of information to third parties that are not affiliated with their organization. This means that they do not have the right to provide articles at the request of third parties.

- Affiliations with universities will allow us to access their subscriptions (that is, upon request on the platform, user goes to the university proxy and downloads free content from there).

- Any university can access the content other affiliated universities are subscribed to (in this case we act as an intermediary).

For authors

- When authors upload their published articles to the platform themselves, they receive bonuses directly proportional to the number of references to these articles in other publications.

- It means that if the article is useful, the author receives a reward, which exceeds the amount spent on posting it on the platform.

Model of Interaction

This scheme is most efficient for promoting science in third world countries, including Russia, which does not spend enough money on scientific development.

Users

After buying an access to the platform, users can:
• Read articles that are normally in restricted access
• Upload their articles and get paid for them.

Organizations

Get the opportunity to exchange requests and expand the knowledge base through the blockchain.

Publishers

Sell subscription rights to Globex SCI and receive payments from downloads of articles posted in the blockchain, without risk of spreading pirate content.

Manufacturing companies

Gain access to the target audience through the platform.

Success Factors

Market

Clear target audience of more than 50 million medical professionals around the world and market volume of more than $250 billion *(according to [TNS Gallup](#))*

Demand and problems

Demand for the project from major universities and test results that confirm problems in the industry

Economics

Authors can get a payment while keeping the rights for their publications

Trends

The project is at the intersection of the next twenty years' tendencies: medicine, blockchain and big data

Project founders

The project team consists of scientists in the field of medicine, blockchain-developers and top managers

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Platform Structure

Globex SCI ecosystem is supported by various scientific research, public data and clinical results that are transferred to the blockchain. This allows to introduce the deep learning technology and recognition of requests logic for the exact structuring of knowledge and search of new materials.
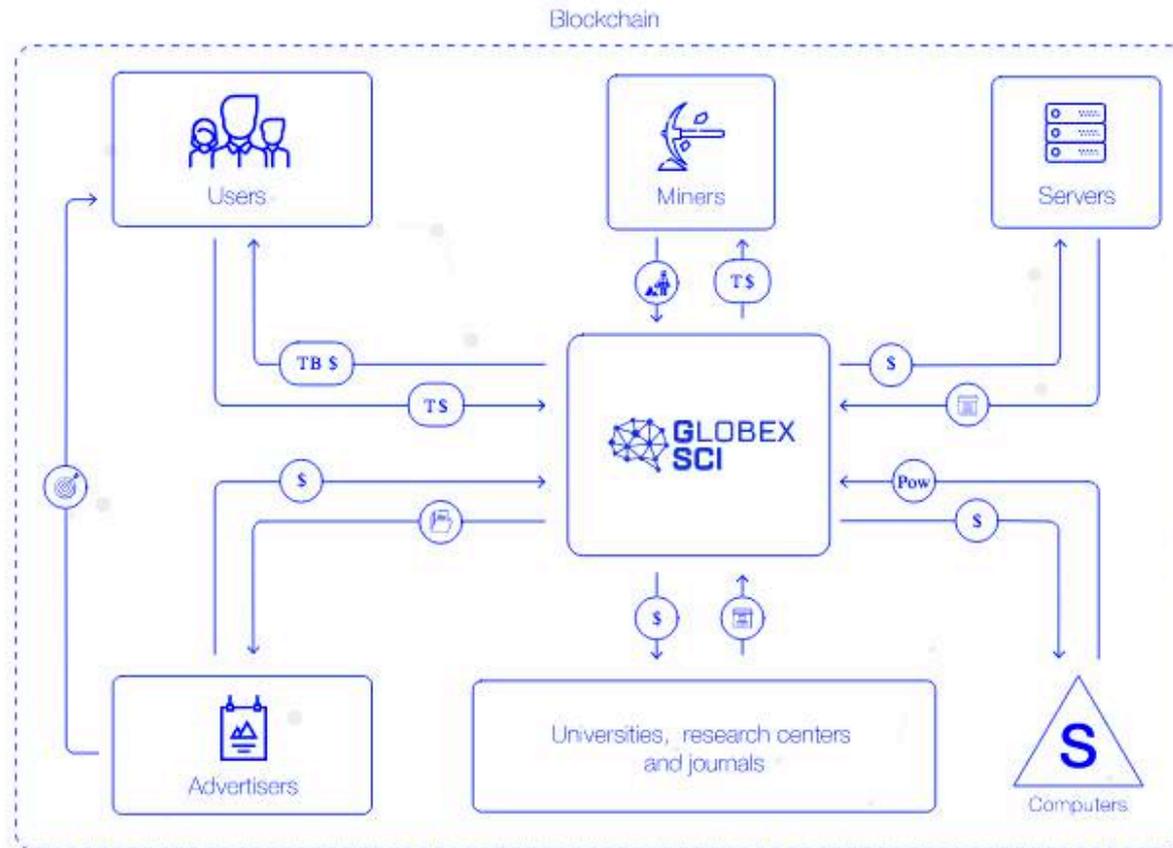
Internal Globex structure

Databases of scientific works merge into one 100-terabyte data array. Registration data and search requests information are being depersonalized and gathered in Big data platform, which helps to target articles and ads.Ecosystem routs and processes texts, while AI designs relevant content picking algorithms. By analysing user experience, we create user-friendly updates and interface.

PLATFORM STRUCTURE

Users

The platform divides users into two categories: readers and content makers. Readers, who hold tokens (in the future coins), use them to purchase subscriptions or one-time access to scientific database. Content-makers receive crypto-rewards for their content depending on number of requests of their articles.

Miners

Miners keep part of scientific articles database, providing hard-drive space and computational power for stored data processing.Miners receive rewards for each external access to their articles, which are stored on their devices.

Servers

For distributed data storing we use additional servers, which provide extended content security.

Advertisers

Owing to platform characteristics, the level of engagement in the content reading remains high. This gives an opportunity to monetize the user base by selling it to advertisers using RTB model and DMP (we are the data owners).
Advertisers pay for each view of relevant native advertising in the context of scientific article.

Universities, research centers and academic journals

The platform can buy subscriptions to a number of publishing houses, distribute it among its blockchain users or pay them for each article access request on the Globex SCI platform.Publishing houses sell subscription rights and receive deductions for users downloading their articles stored in blockchain without risk of spreading pirate content.

MVP

A website with the array of all the articles available at Sci-Hub will serve as MVP. This website will require user registration and count articles consumption to collect analytics (for the purpose of determining the economy of the system, potential tariffs and payments to rights holders and authors of articles).

Potentially

- Accepting payments and providing access to articles for a fee.
- System for storing articles in blockchain.
- Miners reward system.

Why we need Blockchain

Blockchain is a sequential chain of blocks containing information built by specific rules. It is a set of computational capacities, on which information is stored and processed.

Data volume

We plan to collect a scientific database, the size of which will amount to hundreds of terabytes. The contents of the articles will be stored in the blockchain, for the reason it is especially fault-tolerant and secure (data once entered in the registry cannot be changed or destroyed). The computing power will be provided by the miners for a reward.

Globex Coin

We use blockchain to process Globex Coin transactions to avoid the problem of double spendings and to guarantee the operation of mutual payments subsystems based on Globex Coin and transactions history verification.

Interested Parties

The platform is a common ground for a few interested parties.

Users

Readers and authors of the content. Our potential audience is 50 million people around the world who need scientific knowledge or write academic articles. Users holding tokens (further on coins) use them to pay for a subscription or a one-time access to a scientific database. Content-makers receive crypto rewards for their content, depending on the number of requests of the written articles, without losing copyright.

Miners

Store part of the scientific articles registry, providing their disk space and computing power for processing stored information. The registry is not stored entirely on the miner's machine: information blocks are duplicated in order to preserve the system data. Miners receive rewards for each request of an article stored on his machine.

Advertisers

Due to the special characteristics of the platform, the level of involvement in the reading of the content is very high. This provides an opportunity to monetize the audience by selling it using the RTB model (auction for a relevant user to view advertisement) to advertisers. The advertiser pays for each view of relevant native advertising in the context of a scientific article. We will produce native advertising publications that appeal to readers more than banner advertising.

Universities, research centres and academic journals

Globex SCI uses different strategies in this segment. For instance, it can purchase subscriptions for a number of publishers and distribute them among its members in the blockchain, or make payments from each request of an article posted on the platform. Publishers sell the rights to subscriptions to our company and receive payments when users download articles posted in the blockchain, without risk of distribution of pirate content.

Investments and Economics

ICO is the most preferable way of raising money for Globex SCI, as only using it we can achieve independence of system from private interests, preserving the advantages of the platform.

The duration of the crowdsdale
Pre-ICO – from 7 February to 7 March 2018
ICO – from 17 March to 17 April 2018

Financial target
Hard cap – 60000 ETH
Soft cap – 3000 ETH

Token name – GSI
Currencies for investment – BTC, ETH.

Token GSI –GSI token is a key to using Globex SCI platform. The platform services will be paid for with GSI tokens using the system of smart contracts.

About Token

Type: utility, tradeable at the exchange
Token price: 0,7 USD

Services provided for tokens:

- Saving scientific materials in the blockchain to verify authorship;

- Saving massive data sets in the blockchain or in other form on the platform;

- Providing paid access to data arrays;

- Performing distributed statistical analysis and mathematical processing of data;

- Distributed machine learning, in particular, training of neural networks;

- Creating products in the form of external API based on mathematical models trained in the blockchain;

- Developing a platform for biological systems modelling.

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PRE-ICO

The first stage of krauseyla will be Pre-ICO. Its implementation is scheduled for March 7, 2018. The duration will be 1 month. The goal of collecting this stage will be an amount of 3 000 ETH.
The maximum number of tokens for sale on the Pre-ICO: 140,000 GSI
All the collected funds of this stage will be used to launch the project.

The distribution scheme of pre-ICO funds collected:

Pre-ICO	
Equipment for work	6,9 %
Software	2,2 %
Wage	13,9 %
Rent office	0,7 %
Taxes	6,9 %
HR	13,9 %
Server rental	6,9 %
Marketing	41,6 %
Legal expenses	6,9 %

ICO

The main stage of the crowdsdale will take place one month after the completion of the Pre-ICO..
Date: March 15, 2018.
Duration: 1 month.
Minimum fee: 8,600 ETH
Maximum fee: 57,000 ETH

Scheme of distribution of funds collected for ICO:

Pre-ICO	
Equipment for work	1 %
Software	0,3 %
Wage	50 %
Rent office	0,6 %
Taxes	17,7 %
HR	4,9 %
Server rental	5 %
Marketing	20 %
Legal expenses	0,8 %

BONUS CALCULATION SYSTEM

When carrying out the Crowdsley ICO GlobexSci, the system of charging additional GSI tokens in the form of bonuses for investors will be used. The bonuses will be calculated based on the time at which the purchase takes place:

Stage	Pre-ICO			
Period	1 week	2 week	3 week	4 week
Bonus %	30 %			

Stage	ICO				
Period	1 week	2 week	3 week	4 week	5 неделя
Бонус%	35 %	30 %	20 %	10 %	0 %

Bonuses are calculated using a smart contract for the number of tokens purchased.

For example: An investor wants to buy tokens for a total of 10 ETH, at a price of 0.0015ETH per 1 GSI token. The investor acquires 6667 GSI tokens without bonuses, and further, in accordance with the ICO stage, as well as the completion time of the transaction, the amount of bonus tokens to be credited to the investor's account is determined.

Stage	Period	Bonus%	Tokens to enrollment
pre-ICO	1 week	30 %	8667
	2 week		
	3 week		
	4 week		
ICO	1 week	35 %	9000
	2 week	30 %	8667
	3 week	20 %	8000
	4 week	10 %	7333
	5 week	0	6667

Token allocation
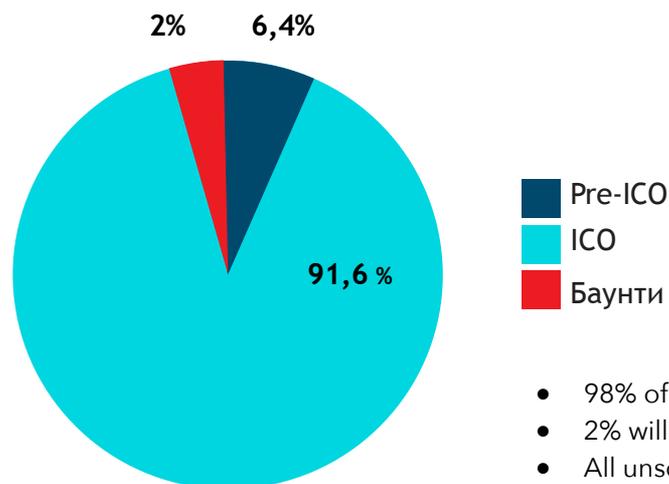
Total	**32000000**	**100%**
Pre-ICO	**2000000**	**6,4 %**
ICO	**29280000**	**91,6 %**
Bounty	**640000**	**2 %**

- 98% of all tokens will be distributed among the investors.
- 2% will be used for a bounty program.
- All unsold tokens will be "burned".

Investment limits

- **Pre-ICO**
  Number of tokens available: 2 000 000 GSI
  Minimum sum of transaction: 0,1 ETH
  Maximum sum of transaction: limited only
  by the number of available tokens.

- **ICO**
  Number of tokens available: 30 000 000 GSI
  Minimum sum of transaction: 0,1 ETH
  Maximum sum of transaction: 1 000 ETH

Investor benefits

Token has a speculative potential: its value increases along with the demand for a big array of scientific publications. Constant updates with up-to-date information will ensure an active growth in the number of users of the platform and the token value.

Sum of investment	1 year	2 years	3 years
$100 000	$5 807,34	$72 719,62	$390 929,38

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Roadmap

Technical aspect	Marketing aspect
2018 год	
Second quarter Creating articles database on our servers basing on the existing Sci-Hub database, optimizing text search system, creating a prototype articles storage system in the blockchain;	Testing the demand on the main communication channels and signing preliminary agreements with scientific communities and universities.
Third quarter Creating a subsystem for uploading new articles and access management;	Developing communication strategy and marketing campaign for 2018-2019.
Fourth quarter Developing a system for storing articles on a decentralized platform;	
2019 год	
First quarter Creating a subsystem for charging users for access to materials and a subsystem of rewards to rights holders;	Connecting three universities through direct sales and attracting 200,000 researchers.
Second quarter Creating Globex Coin and a mechanism for issuing our own tokens;	Improving positioning, USP and product characteristics.
Third quarter Identification of authors and rights holders of all existing articles;	Signing contracts with key advertisers in the pharmaceutical and biotechnological industries.
Fourth quarter Providing access to articles of other users to universities that gave the system access to their articles.	

System Development

1. Creating articles database basing on the existing Sci-Hub database – a repository of scientific materials with a capacity of 250 terabytes, for the moment.

2. Subsystems development:
- Subsystem for uploading new articles
- Subsystem for access management
- Subsystem for charging users for access to materials
- Subsystem of rewards to rights holders

3. Creating Globex Coin

4. Identification of authors and rights holders of all existing articles in order to pay them rewards.

At the first stage of the platform development, GSC tokens created on the base of the Ethereum blockchain will be used for mutual payments.
In the future, Globex Coin will be implemented in the framework of the platform for financial transactions.
The platform will provide a mechanism for issuing tokens for solving applied tasks, such as raising funds to conduct a research and write an article.

Financial Model

Drawing on startup metrics and token logic, and taking the special features of crypto-technology into account, we developed a financial model. The model is available here

The model shows that the project is viable, and demonstrates cost efficiency already in the third year. In this case, we do not take into account the increase in the token value, as it is hard to predict.

In short, the model shows:

- There is a market and there is money in this market.
- We have an audience and it is constantly renewing: after school people go to universities, become professors, write dissertations and so on.

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Team

Scientists and developers, founders and advisers connected by 15 years of collaborative work. We are bound by the common pain and goal - to unite scientists into one big community and to give access to common knowledge.

Shamil Mugattarov

Economist, policy maker and public person, founder of a few successful companies in real estate management and biotechnologies development.

Valuable experience:
– His ability to structure and organize business on the basis of scientific developments and new technologies will help to create a high-profile team for the development and launch of a new scientific platform of world knowledge.
– Work with eminent scientists and scientific laboratories of leading universities on problems of biotechnology and genetics has revealed great problems in sharing achievements and research results. It made possible to create the Globex SCI platform on the base of these universities.
– Economic skills in the field of scientific research will serve to establish a self-sufficient scheme of platform development.

Nikolay Barlev

Deputy Director of the Institute for Citology of the Russian Academy of Sciences, Doctor of Biological Sciences, Professor, Editor of several journals in Nature Publishing group, Editor-in-Chief of Cell Life and Technology journal.

Valuable experience:
– Long working experience in one of the world's largest publishing houses (Nature Publishing Group) provided an opportunity to assess the informational inequality between the authors of articles and representatives of the publishing houses.
– Operational thinking and the ability to structure and organize the work of specialists will allow to gather and motivate a top-class team for the development and launch of a new scientific platform for world knowledge.
– Close cooperation with the world's leading universities on scientific and publishing issues on the one hand, and direct interaction with publishing houses on the other, will provide a legal solution for the unequal access of scientists to new and relevant knowledge.
– Economic skills in the field of scientific research will serve to establish a self-sufficient scheme of platform development.

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Team

Arthur Teregulov

Blockchain programmer. Organized a series of specialized meet-ups on the topics of crypto-currencies and blockchain technologies. Participant of numerous hackathons.

Valuable experience:
– Possesses skills of organizing the software development process, finding approaches to solving complex and ambitious tasks, motivating the team to achieve results and to maintain a high pace of work.
– Uses the most advanced IT-technologies and new approaches to development, always tries to measure up to the highest industry standards.
– Experience of creating startups allows him to determine the most efficient ways to make a product, highlight its value, and put it on the market in the shortest time period.

Ilya Vinnikov

Developer
Blockchain teamlead is part of the CTO group

Advisers

Jerry Melino

Professor, Head of the Department of Experimental Medicine and Surgery, University of Rome, Italy, Science Consultant for Chanel International B.V.

Mauro Piacentini

Professor, Head of the Department of Biochemistry, University of Rome Tor Vergata, Rome, 00133, Italy,
Member of the Board of Directors of the University of Tor Vergata,
Editor of many international scientific journals.

Nikolai Putin

Board member of All-Russian Union of Cultural Workers

Oleg Demidov

Professor, Doctor of Medical Sciences, Head of Research Groups in Biotechnology and Genetics at the Institute of Health and Medical Research of INSERM U866 and University of Burgundy, Dijon, France.

Anastasia Demidova

PhD in Medicine, INOVARION company, Head of Department for Research in Life Sciences , HOSPITAL SAINT-ANTOINE, INSERM UMRS 938, PARIS, FRANCE.

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