# UMKA

# Business
# Work
# Education

**Employment and IT-specialist hiring**
**Freelance marketplace**
**Testing systems: soft and hard skills**
**Digital passport**

White Paper

**2018**

# Glossary

**Agile (Agile Methodology)** — a flexible methodology based on the principles and values of an iterative approach to product generation and development.

**Agile Smart Contract (AgileSC™)** — a smart contract based on a flexible methodology. It includes customized iterations and milestones.

**Arbitrator** — an Expert, i.e. a platform user with a high ranking in the corresponding field. Arbitrators receive a fee equal to one percent of the disputed amount.

**Asset** — a token with a price equal to the price of a cryptocurrency or a fiat currency. The token is emitted as a smart contract within the EOS blockchain. Assets for different currencies are used for payments within the UMKA platform. Read more in the section UMKA Blockchain.

**Employer** — an UMKA user in need of one or more Specialists for involvement in a project (either individually or in project groups). One of the signatories to an Agile Smart Contract.

**Expert** — an UMKA user with the highest rating in his/her field able to establish testing systems and participate in arbitration for a fee.

**Specialist** — an UMKA user providing his/her services to the Employer. One of the signatories to an Agile Smart Contract.

**Iteration** — a contract stage. A time period allocated for completion of a task in an Agile Smart Contract.

**Milestone** — a final and determining iteration point in an Agile Smart Contract.

**Parties** — parties, signatories, an Employer and a Specialist making a transaction in an Agile Smart Contract.

**UMK** — the service's token. All token holders participate in the distribution of the platform's profits. Read more in the Tokens section.

**UMKA Wallet** — a multicurrency wallet of the UMKA service.

**Smart Contract (SC)** — a smart contract in the form of a safe transaction.

# Project Summary

# Description

UMKA is more than just a decentralized labor or freelance market. It is an ultra-efficient project implementation and team-building tool based on blockchain technology.

**UMKA is a comfortable space for cooperation between Employers and Specialists that offers a wide array of useful tools integrated into its system:**

**digital passport** contains user's data. The data is stored on the blockchain. The digital passport contains all the information about about user's skills and qualifications, his/her work experience and a possible list of courses completed within UMKA platform sources. The digital passport makes easier for employers to find freelancers with the required skill set;

**secure contracts** using our unique AgileSC™ (Agile Smart Contracts) technology. Secure contracts are useful for making milestone payments, because they make managing difficult long-term projects easier. In the case of unforeseen situations, either/both parties can initiate use of the UMKA Arbitration system to resolve the issue;

**arbitration system** is a system for resolving disputes that arise on the platform. The Arbiter is another kind of UMKA system user, i.e., a disinterested party with a sufficient rating on the platform to act as an objective referee;

- **project groups** are used to organize and foster cooperation when multiple Specialists are needed on the same project;

- **GNMT** — Google Neural Machine Translation is integrated in UMKA's chat engine to help users from different countries communicate freely;

- **expert communities** — communities and disputes that arise during the working process are moderated by the users of the platform. Users who have attained a certain rating can become Arbiters to participate in disputes, and also participate in the platform's development by conveying the opinions of the masses.

# One of UMKA's goal

is to form the expert communities
and give them the best environment for work,
education and personal development.

UMKA offers Employers a selection from thousands of Specialists, with the required competence levels as recorded in their digital passports.

UMKA provides Specialists with access to thousands of projects, vacancies, testing systems, with a self-control function, and training programs from the world's leading educational institutions.

UMKA is much more than just job search. It is a smart system that makes it possible for Employers to set precise requirements for Specialists, while Specialists are able to follow market trends, in order to develop the specific competencies needed to keep up with rapidly changing technology, industries and markets.

UMKA's project teams feature allows Employers to hire multiple Specialists to work together on large projects. The Employer manages the project budget using AgileSC™ per arrangements made with each Specialist individually. The feature provides group chat for all participants.

UMKA means financial safety for all users: all platform transactions use agile smart contracts based on blockchain technology. AgileSC™ offers an opportunity for stage-by-stage project payments and agreed upon amendments while guaranteeing efficiency and convenience for all parties involved.

**UMKA also features:**

- A user-friendly interface implemented as a mobile application, a web version and a desktop client (Q4, 2018)

- 24/7 customer service and technical support

**Monetization**

UMKA takes a **1%** commission from all transactions within the platform.
It is the lowest commission of any labor and freelance platform market to date.
Funds gathered this way will be distributed among UMK token holders.

# Decentralization

The UMKA service is a decentralized user-managed system. It is based on Delegated Proof of Stake, a consensus algorithm of the blockchain.
The **"UMKA Foundation"** ensures the system's operation and development. Agile Smart Contracts containing participants' data, transactions and terms thereof are recorded in the blockchain. This means that all transaction data is accessible to all service participants equally. However, amendments may only be initiated by the transacting Employer and the Specialist.

# Personal Data Security

The user login is stored on the blockchain and accessible only by using a generated private key encrypted by the user's password. This system denies access to the UMKA Wallet and its associated accounts to anyone except the user. Such security levels meet up-to-date personal data encryption requirements.

# Umka

# How operates

**Assets for fiat and cryptocurrencies**

In order to simplify fiscal relations between users, UMKA introduces assets for cryptocurrencies and fiat currencies. An asset is essentially a token (or an equivalent) for a currency in the UMKA blockchain supported by the cryptocurrency balance in their UMKA wallet and the fiat balance on the account of the UMKA entity. Assets allow minimizing transaction costs for users, since the flow of funds inside the platform will not be influenced by other blockchains' or banks' commissions. Assets are used for fast work of smart contracts and financial security guaranty for users. The flow of funds is conducted via smart contracts, which, during the initial stage, are going to work with assets of Bitcoin and Ethereum. Later on, seven new cryptocurrencies and fiat assets will be introduced.

**Eventually, the following currencies operations will be possible[1] in UMKA's system:**

| | | | | |
|---|---|---|---|---|
| Bitcoin | Ethereum | BitcoinCash | Dash | Dogecoin |
| Emercoin | Ethereum Classic | Litecoin | Ripple | Fiat Currencies |

1 // Will be available in Q4, 2018

**Deposition and withdrawal of funds**

Assets of any currency can be purchased at a 1:1 rate. For example, if a user deposits 1 BTC, they will receive the number of asset tokens equal to 1 BTC.
Assets can be withdrawn to an external wallet.

# Profile registration (Specialist/Employer)

## Specialist User:

**Upload Portfolio**

**Update profile information**

**Upload CV**

**Search for job proposals**

Contract with the Employer
Tasks completion
Receipt of payment
Leave feedback
Withdraw funds

**Selection of an online course**

**Payment in BTC, ETH or another currency[2]**

**Receipt of an electronic certificate and an entry in the digital passport**

## Employer User:

**Job proposal**

**Composition of an assignment (smart contract terms: milestone budget)**

**Deposit of funds**

**Search for Specialist(s)**

Contract with Specialist(s)
Acceptance of completed tasks
Payment confirmation
Leave feedback

**Project team building**

Contract with individual Specialists
Acceptance of completed tasks
Payment confirmation
Leave feedback

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2 // Payments with 9 cryptocurrencies and fiat will be available in Q4, 2018
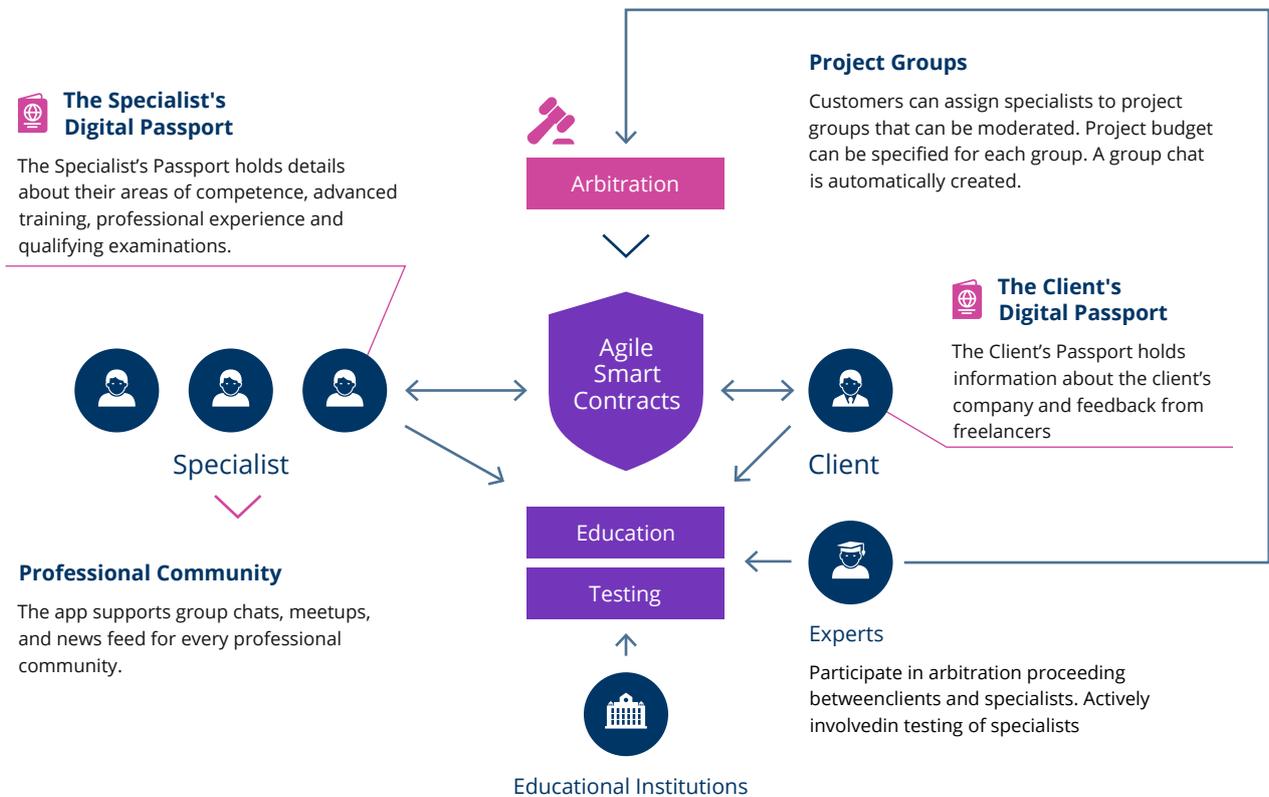
# User Expert[1]:

## Selection among disputes submitted for arbitration

Participation in arbitration, announce decision

Receipt of fees

## Development of tests for Specialists

Receipt of test approvals

Receipt of fees

**The Specialist's Digital Passport**

The Specialist's Passport holds details about their areas of competence, advanced training, professional experience and qualifying examinations.

**Project Groups**

Customers can assign specialists to project groups that can be moderated. Project budget can be specified for each group. A group chat is automatically created.

Arbitration

**The Client's Digital Passport**

The Client's Passport holds information about the client's company and feedback from freelancers

Agile Smart Contracts

Specialist

Client

**Professional Community**

The app supports group chats, meetups, and news feed for every professional community.

Education

Testing

Experts

Participate in arbitration proceeding betweenclients and specialists. Actively involvedin testing of specialists

Educational Institutions

3 // The expert arbitration system will be released in Q4, 2018

# Challenges of Similar Services and UMKA Solutions

**Challenge:**

Large/complex projects requiring multiple Specialists.

**UMKA solution:**

Project groups
In UMKA Employers create project groups to organize the work of multiple Specialists working on a single task. There can be any number of Specialists in a project group. The Employer signs an Agile smart contract with each individually.

**Challenge:** Communications

Specialist interaction on most platforms is only possible in a p2p format. However, multiple Specialists working on a single project need live communication.

**UMKA solution:**

Proprietary group chat incorporating Google Neural Machine Translation (GNMT) is integrated in UMKA's chat engine to help users from different countries communicate freely.

**Challenge:**

No guarantee of timely payment and/or proper work performance.

**UMKA solution:**

Safe deal. An Agile Smart Contract that allows stage-by-stage payment and amendments agreed upon by both parties:

- Contains data on the work schedule, budget and specifications
- The entire transaction amount is put on hold under the Employer's account until the project begins
- Contract amend ments can be introduced and recorded in the blockchain with the consent of both parties
- If one of the parties fails to meet the agreements, the other party does not incur any financial loss

**Challenge:**

High commission fees in the Specialists platform market currently range between 2.7% and 20% of the transaction amount.

**UMKA solution:**

UMKA's commission fee is 1% per transaction. All transaction commission receipts will be used for further service and support improvement.

**Challenge:**

Low speed. All existing decentralized solutions are based on the slow and expensive Ethereum blockchain. Ethereum's global through put capacity is 7 tps while the cost of a smart contract transaction is upwards of $2 USD[4].

**UMKA solution:**

EOS blockchain is a new generation blockchain with fast throughput and free AgileSC™ (Smart Contracts).

**Challenge:**

Poor integration of Specialists within the professional community. Specialists almost never face an information gap; on the contrary, there is abundant information. However, it is extremely difficult to digest, just as it is difficult to put a finger on adequate market prices or professional tendencies and trends.

**UMKA solution:**

For each Specialist category, UMKA creates professional chat boards for Specialists to communicate, coach each other, learn news, share experience, and network[5].

**Challenge:**

Disputes that can not be solved by the two parties involved, but require an objective third party to achieve resolution.

**UMKA solution:**

We offer two ways of settling disputes: one with no third party involved and the other with the help of an objective UMKA Arbitrator chosen from among the Experts. For details see "Dispute Resolution".

**Challenge:**

When making a secure deal on other platforms using smart contracts Employers aren't given the option of breaking the work/payments into several stages, which increases risk.

**UMKA solution:**

Our proprietary Agile Smart Contracts (AgileSC™) is a unique technology developed by the UMKA team. They make it possible to break a project into iterations, set milestones and allow adjusting using three parameters: Time, Work and Budget. Using AgileSC™ minimizes risk for both Employers and Specialists.

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4 // Ethereum — Yellow Paper, p. 20
5 // Release scheduled for Q3, 2018

**Challenge:**

It is often difficult for both Employers and Specialists from different countries to cooperate due to a language barrier.

**UMKA solution:**

UMKA chat was developed with GMNT (Google Neural Machine Translation) built in. Translation quality improves every day thanks to the neural machine translation mechanisms. Language pairs with English will be available for UMKA users.

**Challenge:**

Decentralized platforms on other blockchains operate with only one cryptocurrency.

**UMKA solution:**

On the UMKA platform, 15 cryptocurrencies and fiat currencies will be used. Every currency is represented by a corresponding asset in the blockchain and there are no transaction fees.

# Umka Blockchain

The decentralized application UMKA is based on a fast Turing complete blockchain with inexpensive and  flexible smart contracts (AgileSC™) along with the Byzantine fault-tolerant (BFT) Delegated-Proof-of-Stake-Consensus algorithm, based on EOS.IO. Turing complete free smart contracts allowed us to implement the Agile methodology when developing the project.

EOS is a blockchain that allows for smart contracts for decentralized applications and decentralized, autonomous organizations. EOS has solved the issue of scalability that popular blockchain systems, such as Bitcoin and Ethereum, were unable to solve. There are no fees for users in EOS.

# Consensus Algorithm

Proof of work (PoW) is the most popular consensus algorithm for blockchain solutions, but its performance is not satisfactory, i.e., computations require expensive computational hardware, the network does not scale well and transactions take too long to confirm.

Proof of stake (PoS), on the other hand, has many advantages over PoW. For example, it has better performance, although if a limited number of individuals own enough funds there is the threat of centralization.

Delegated Proof of Stake (DPOS) is based on PoS and introduces elements of representative (indirect) democracy. DPOS allows the users of the network to elect trusted block creators (known as witnesses) who own high-performance hardware. Also, the users of the network can swiftly react to changes in the network and flexibly regulate the blockchain's behavior through an elected committee. In DPOS, it is possible to create a new block every 3 seconds and process a large amount of transactions per second with a very low risk of creating forks.

The hybrid BFT-DPOS algorithm introduces the Byzantine fault tolerance (BFT) mechanic to classical DPOS which allows the blockchain to reach finality in around 3 minutes, which is 10 times faster than Casper[6].

6 // https://medium.com/eosio/dpos-bft-pipelined-byzantine-fault-tolerance-8a0634a270ba

# Software implementation

The decentralized application works on the aforementioned blockchain which lets it run smoothly using the system's resources and, if needed, additional resources. The smart contracts are written in the C++ programming language, which is a universal, convenient tool for the task.

# Transaction costs

There is no transaction cost in the same sense it's used in other blockchains. There are no "miners", whose work has to be paid by users who want to make a transaction. In EOS there are block makers, who are rewarded for their work by the network.

# Mining

There is no mining as a computing process in a delegation network. Instead of the term "miner," our network uses the term "witness" which denotes a block maker selected by the network. Instead of computation for the sake of computation, as in PoW, all Witnesses' computing capacities are used for the network's benefit: i.e., they validate transactions and smart contracts.

Witness services may be offered to the network by any user. Once there are enough votes for their candidacy the user can generate blocks and receive fees in UMK.

# Agile Smart Contract

Agile is a flexible methodology based on the principles of an interactive approach to product creation and development. An Agile Smart Contract (AgileSC) is a new generation smart contract that allows dividing a transaction into any number of milestones and iterations as well as for splitting them
into three parameters:

**WORK**

What needs to be done

**TIME**

What deadline

**BUDGET**

What remuneration

**Agile Smart Contract** ensures the ability to amend each of the three parameters with the consent of both parties. For example, if a Specialist requests an amendment of the Time parameter (pushing the deadline back) and the Employer confirms this action, the new amendment is introduced in the blockchain and must be effected upon attainment of the new deadline.

**AgileSC™ remains a guarantor of a safe transaction because no third party can amend an implemented contract. The entire contract amendment history is stored in the blockchain and accessible to all users.**

The system allows for the supervision of stage-by-stage project progress, simplifies order deadline monitoring, assists in settlement disputes, without third party involvement, and automatically remits the remuneration to the Specialist if the Employer is satisfied with the deliverable.

**AgileSC™**, with recommended iterations and milestones, are generated for each type of project and service offered by UMKA Specialists. This makes it easier for users to operate the system; in most cases they just need to enter the budget to have such a contract approved. Operations with templates take into account the opinions of experts, as well as the experienced professionals from various fields who have a clear understanding of how work with remote talent is best organized.

# Making transactions using AgileSC™

- Using a P2P chat, the Employer and the Specialist agree upon transaction terms and conditions, for example, 1 ETH for creation of a logotype. A nonrefundable commission is withheld from the employer's funds in case of contract cancellation.

- The Employer clicks on the "Handshake" button which opens a window displaying all the contract parameters.

- The users then proceed to contract negotiation.

- The Employer sets forth AgileSC™ parameters, e.g., dividing the contract into two iterations. The Prepay option is disabled in this case and funds are put on hold by the AgileSC™.

- First milestone terms and conditions: sketches of three versions of the logotype in jpg or png format. Duration - 5 calendar days. Budget - 0.75 ETH.

- Second milestone terms and conditions: a clean copy of the logotype selected by the Employer in the png and psd formats. Duration - 10 calendar days from start of contract. Budget 75 UMK.

- Employers can offer jobs directly to specific Specialists or submit a project and then hire Specialists from the responses.

- The Specialist and the Employer carefully review the contract provisions before accepting the terms and conditions.

- A safe AgileSC™ transaction is generated as approved by both parties.
  1 ETH is transferred from the Employer's UMKA wallet account to the AgileSC™.

- Five calendar days later the Employer receives several logotype sketches from the Specialist. Using the "Approve" button, the Employer accepts the project and confirms the completion of the contract's first milestone.

- At the same time, the Specialist automatically has their personal UMKA wallet credited with the payment for the contract's first iteration in the amount of 0.25 ETH.

- In five calendar days, the Specialist delivers the final version of the logotype to the Employer. Using the "Approve and Complete" button, the Employer accepts the project and confirms completion of the contract.

- The Specialist's personal wallet is credited with the remaining 0.75 ETH
  In an anonymous mode, the Employer and the Specialist evaluate each other's performance with scores from one to five (used for ranking purposes) and write detailed feedback. Each of them decides whether they should share the deliverables of their joint work and the contract budget in the personal profile (not required if the task is under NDA).

- After both parties have left feedback and evaluated each other the information appears in both the Employer's and the Specialist's profiles.

# Settlement of disputes in AgileSC™ without third party involvement

Standard contractual practices frequently define items that affect the quality and/or promptness of deliverables, the timeliness of payment and even contract termination. AgileSC™ has a dispute settlement mechanism requiring no third party involvement.

**Examples of dispute situations:**

**The Employer or the Specialist fail to establish communication**
If the Employer or the Specialist fail to exhibit activity within 48 hours after reaching the milestone of the current iteration, or following 48 hours after a contract termination request by either party, the contract is automatically terminated and the entire amount of the current iteration is released to whichever contract party confirms their activity. This mechanism ensures payment of the Specialist's job if the Employer fails to establish communication, and assures the Employer they do not have to pay for uncompleted work.

**The Employer is unable to pay out the whole contract price**
Before an AgileSC™ is generated, the balance of the Employer's UMKA Wallet is checked. After the contract is signed, the amount required for full payment (all iterations/milestones) is automatically put on hold. Holding the entire contract price in the AgileSC™ system guarantees that the Employer has the funds required to pay for the scope of services provided by the Specialist.

**The Employer adds new requirements or the Specialist proposes that the scope or cost of work needs to be increased or decreased**
Changes in the scope of work are usually associated with changes in the final contract price. The parties can either agree on modifying the current contract or write an additional AgileSC™ covering only the new requirements. If the parties decide to modify the current contract price, they should generate additional milestones or increase the requirements detailed in the existing milestones by adjusting the work, time and budget parameters.

If the contract price moves upwards, this change is registered in the blockchain as an additional agreement. Before it is signed, the balance of the Employer's UMKA Wallet is checked again and the additional amount is put on hold. If the contract price moves downwards, the unused funds are returned to the Employer's wallet.

# AgileSC™ Termination

If the Employer and the Specialist decide to terminate their contractual relationship, they can do it at any time by using the contract management interface. Contract termination requires the consent of both parties. If one of the parties is not prepared to terminate the contractual relationship there are several approaches they can use before involving a third party. (See Settlement of disputes in AgileSC™ without third party involvement).

**Termination at the beginning of relationship without prepayment**

If the Employer and the Specialist dissolve their relationship by mutual consent before or in the course of attaining the first, or only, AgileSC™ milestone, the AgileSC™ is marked "Without Prepayment" and the entire amount being held in the AgileSC™ returns automatically to the Employer's wallet.

**Termination at the beginning of the relationship with prepayment**

If the Employer and the Specialist dissolve their relationship by mutual consent before or in the course of attaining the first (or only) AgileSC™ milestone marked "With Prepayment," the entire amount of the first AgileSC™ iteration automatically goes to the Specialist's wallet. The subsequent iterations' amount automatically returns to the Employer's wallet.

**Termination of current relationship after attaining the first milestone**

If the Employer and the Specialist dissolve their relationship by mutual consent during the course of any iteration of the contract, except the first one, the AgileSC™ management interface allows them to agree on what to do regarding payment for the current iteration in the form of bidding. The subsequent iterations' amount is not subject to bidding and returns automatically to the Employer.
The Employer may propose that 50% of the current AgileSC™ iteration be paid to the Specialist and 50% be returned to their wallet. If the Specialist agrees, the parties shake hands, close the dispute, and the current iteration amount is automatically distributed between the parties' wallets.
If either party disagrees, or proposes a different settlement, the parties are given 48 hours to reach either a mutually acceptable agreement to the dispute by themselves or utilize the anonymous arbitration option. (see clause Settlement of disputes in AgileSC™ by arbitration).
If the parties are unable to settle the disagreement and neither applies for anonymous arbitration, the current iteration amount is shared equally (50%/50%) and paid automatically to the their respective wallets. Any subsequent AgileSC™ iteration amounts are returned to the Employer's wallet.

# Dispute resolutions in AgileSC™ by Arbitration

In any contract relationship, the human factor, lack of information or drastic changes in terms and conditions may lead to situations that cannot be settled without third party involvement. Before a contract is terminated, the parties are given 48 hours to settle the argument. During period they may settle the conflict on their own by using a bidding mechanism or utilize anonymous arbitration.

Anonymous arbitration utilizes the UMKA platform Expert with the highest ranking in their field.

The Arbitrator reviews the conflict anonymously and awards judgment based on a detailed report. An arbitration fee equaling 5% of the disputed amount is awarded to the Expert who serves a Arbitrator and deposited in their wallet.

Any UMKA platform Expert can become an Arbitrator in a dispute and earn an arbitration fee. Immediately after a Specialist is assigned a rating qualifying them for Expert status notices of current disputes will automatically appear in their profile. The Arbitrator's award is reflected in the Employer's and the Specialist's profiles, thus enabling every user to draw their own conclusions as to the fairness of the award before they make contact with the non-prevailing party.
In spite of the need for arbitration, the Employer and the Specialist award anonymous scores and write feedback, just as they do for all completed transactions.

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7 // The Expert Arbitration function will be available in Q4, 2018. Until then the developers of UMKA will function as arbiters.

# UMKA Digital Passport

Each UMKA profile has a Digital Passport[8] containing user data.
The Specialist passport records competence areas, professional development, work and other experience, qualifications, etc.
The Employer passport contains contractor feedback and the company profile.

Key information is stored in the blockchain. Passport details are accessible by all registered platform users.
Other data such as diplomas, certificates, user portfolios, etc. will be stored in the IPFS file system. Users' personal details will be stored in the blockchain.

# UMKA Functionality

## Rating system

UMKA uses a fair and transparent statistical system that ensures there is no rating fraud or falsified feedback.

Scores from one to five are awarded by the parties anonymously only after the transaction if completed. The Employer cannot see the Specialist's feedback until they post their own feedback and vice versa. Both the Specialists' and the Employers' feedback is accessible to all registered users.

Be default, the order history in the profile also reflects some AgileSC™ data: what tasks, in what timeframe and for what remuneration has the Specialist completed. If desired, it is possible to conceal the cost of completed works and details of the tasks, but the feedback and scores cannot be concealed. This transparent rating system gives both parties the opportunity to thoroughly review each other's track record before entering into a contract.

8 //  Digital passports will be issued starting Q4, 2018

## Payment

All transactions within the service are done via the internal UMKA Wallet using smart contract assets. In order to start working with the service, users need to create a personal wallet and recharge it using a debit or credit card, PayPal or a cryptocurrency wallet.

## UMK Token

The UMK token guarantees participation in the distribution of the platform's revenue. The token balance will be shown in the user's wallet and rewards are accumulated proportionally to the number of tokens.

## Fee

UMKA charges Employers a 1% fee of all safe transactions. This small fee establishes confidence within the system and makes the service absolutely free for Specialists and acts as a guarantor of the integrity of Employers. Funds are distributed between UMK token holders automatically (when the bank reaches $150,000 USD or its equivalent in another currency). Revenue received from tokens belonging to the managed fund will be used for the support and development of the platform.

# Integration with Third–Party Services[9]

**Rating import**

UMKA supports import of profile ratings from other platforms in its search for remote Employees: Upwork, Freelancer, and Fiverr. Following confirmation of authenticity of the information provided, the Specialist's UMKA profile displays the rating score from the profile of the imported platform. This facilitates faster confidence-building within the UMKA platform resulting in faster initiation of the first transaction.

**CV import**

In order to raise the confidence level of Employers, UMKA enables CV and portfolio downloading in PDF format or information importing from a LinkedIn profile.

**Social network profile import**

In order to raise the confidence level of Employers, UMKA enables CV and portfolio downloading in PDF format or information importing from a LinkedIn profile.

**Social network profile import**

Profiles can also be filled in with links to accounts in VK, Facebook and Instagram.

**GNMT in UMKA's chats**

UMKA strives to remove all boundaries between its users. In order to make communication between Specialists and Employers easier UMKA's chat has built-in the Google Neural Machine Translation (GNMT). Since its launch in 2016 the service has been developing actively and the translation quality improves daily thanks to the neural network learning mechanisms. Language pairs with the English language will be available for all users of the platform.

9 // The functions, described in this section will be released in Q4, 2018

# UMKA Mobile Applications for Android and iOS

By Q2, 2019 an interface for UMKA mobile applications will have been developed for both Android and iOS. Demo versions of these applications are available on iTunes and PlayMarket. Full capacity versions are scheduled for development and implementation in Q3, 2019.
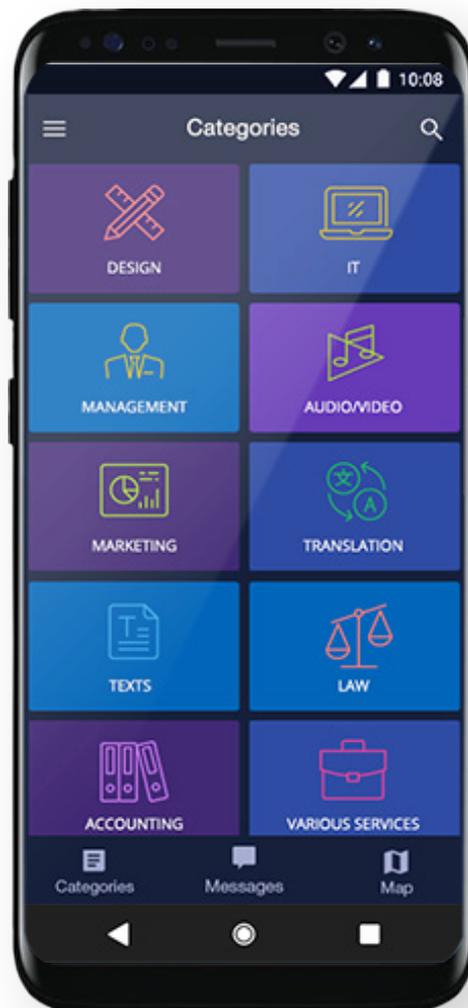
# Market Review

## Freelance and Remote Employment Market Today

The global freelance and remote employment market has exploded in recent years. According to Upwork, more than a half of the US workforce will switch to freelance by 2027. This is a clear demonstration of the trends afoot in the global labor market.

**The majority of workers will freelance by 2027**

Non–freelancer

102,7M

86,5M

Projected workforce size

57,3M

83,4M

Freelancer

2017

2027
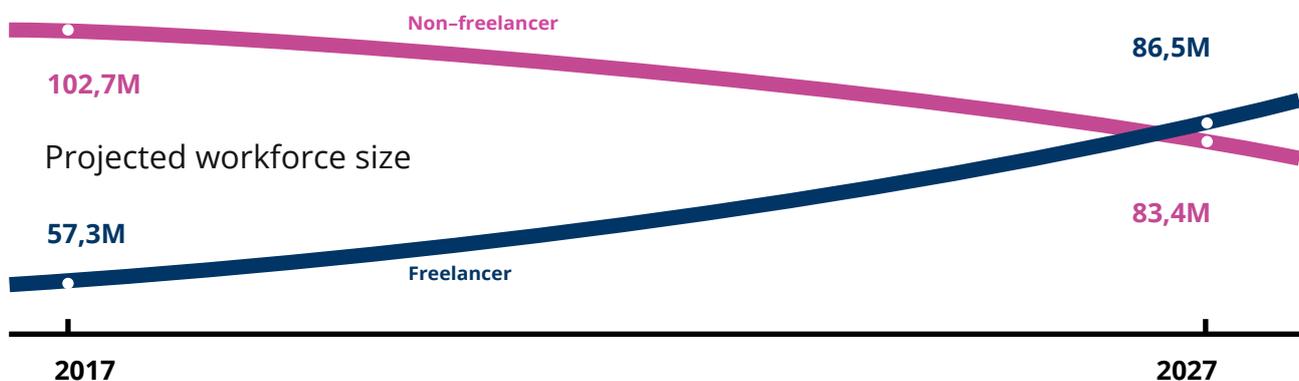
In 2015, Payoneer conducted a study of the world labor market (demography, education, labor organization, and income level). During 2014 and 2015, they interviewed over 20,000 freelancers throughout the world to compare rates and determine a true market value of their services. According to that study, an average world hour rate was $21 USD[10].

A new study conducted in 2017 reported that an average hour rate compared with 2015 went down to $19 USD[11]. Analysis shows that this trend is the result of an inflow of freelancers from developing countries who have taken over a sizable share in the freelance economy. This is direct evidence of the growth and changes in the labor market in the last three years.

Each year, it is accessed by a growing number of freelancers from developing countries. Oxford University recently published a report in which India and Bangladesh are mentioned as the largest world market of freelance services (Oxford University. The Online Labour Index[12]).

The global freelance market is growing along with the demand for remote employee services. Based on the US labor market study "Freelancing in America 2017"[13], Payoneer analysts have found that in the US individual entrepreneurs account for over a third of the country's total workforce. In 2015, the number of Americans considered to be self-employed was about 53.7 million, in 2016 — 55 million, while in 2017 it reached 57.3 million, or 36% of the national workforce.

10 // The Freelancer Income Survey results — https://blog.payoneer.com/freelancers/industry-tips-fl/the-freelancer-income-survey-results-are-in/
11 // The 2017 Freelancer Income Survey results are here — https://blog.payoneer.com/news/2017-freelancer-income-report/
12 // The Online Labour Index, iLabour, 11 July 2017 — http://ilabour.oii.ox.ac.uk/online-labour-index/
13 // Freelancing in America 2017 — https://www.upwork.com/i/freelancing-in-america/2017/
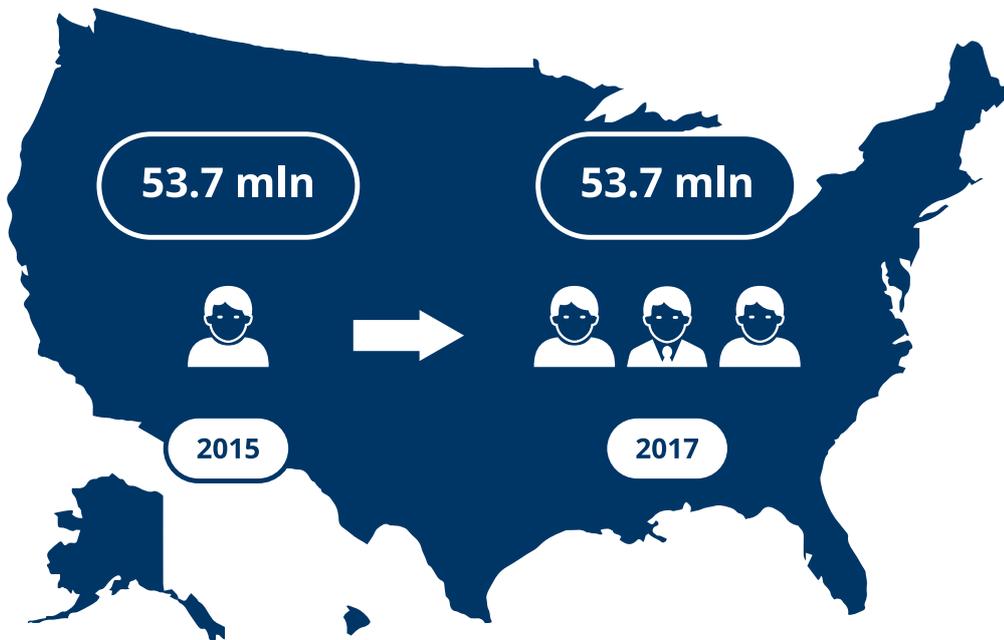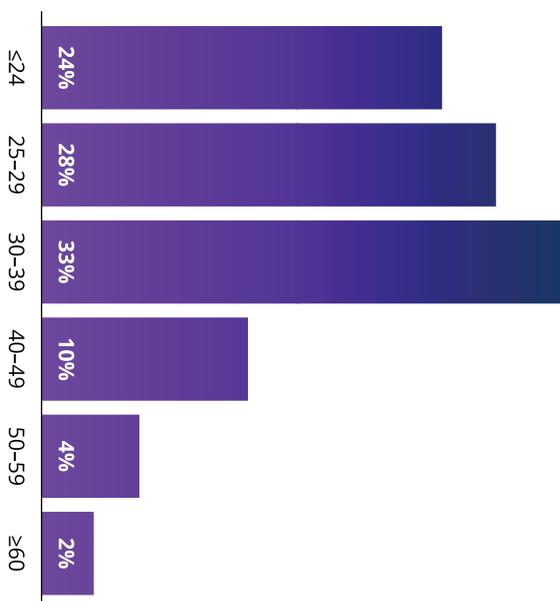
**Freelance in the USA**

For the sake of comparison, let us take one of the Russian labor market studies conducted by consulting analysts of J'son & Partners. According to that study, the number of Russians who switched over to remote jobs has grown by two and half million since 2014. That means there are five million freelancers in Russia now and, relying on J'son & Partners forecast, in three years their number will grow to 14 million or 20% of the labor market.
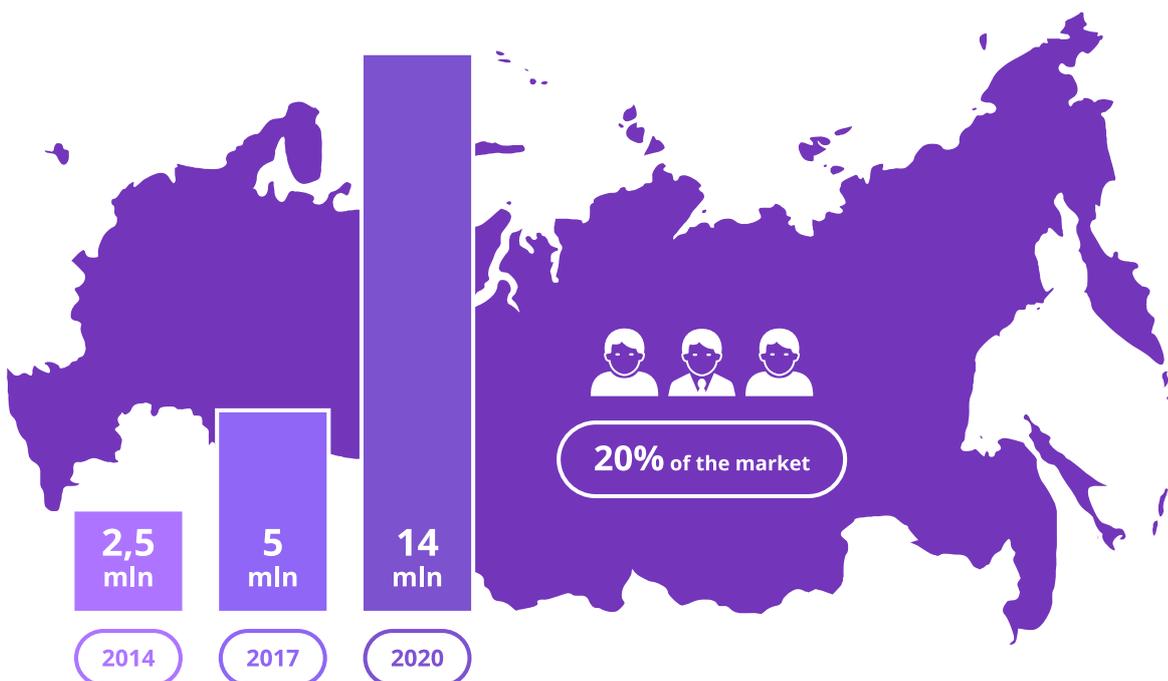


**Freelance in the Russia**

Europe and the US are the markets with the highest demand for remote services. European employers are serviced by 51% of freelancers. In 2015, US employers accounted for only 37% of freelancers, which has grown to 68% currently.



North America: 68%
Europe: 51%
Latin America: 21%
Asia: 18%
Australia: 15%
Middle East: 9%
Africa: 7%

Freelance Market (popularity of the remote services)



≤24: 24%
25–29: 28%
30–39: 33%
40–49: 10%
50–59: 4%
≥60: 2%
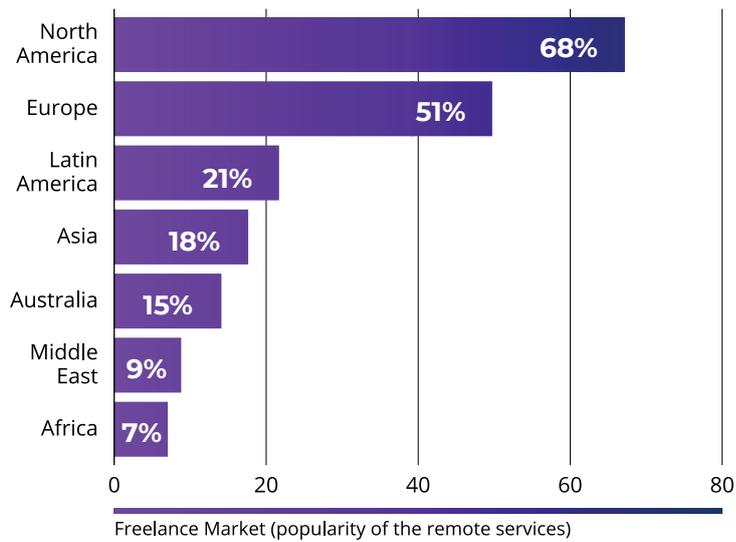
Over 50% of freelancers interviewed are younger than 30 and almost a quarter of them are younger than 25. Only 6% of the respondents are older than 50.

### Where Do Freelancers Find Jobs?

As of 2018 freelance platforms have grown into an international customer base offering jobs to 73% of freelancers. The role of social networks has also increased. In 2015, only 8% of freelancers used professional online networks in search of jobs, while this figure rose to 38% in 2018. Specialists previously used LinkedIn to find remote opportunities, but they are increasingly using Facebook for professional advancement. 54% of Specialists advertise their services on Facebook vs. 40% on LinkedIn.

### Why Will the Freelance Market Continue to Grow?

**1. Millennials:**

The generation born in the 1990s and 2000s, i.e. those aged below 35, form the basis of contemporary freelancers. Unlike previous generations, millennials are looking for occupations which have a positive influence on the world and/or are exciting. They are enthusiastic users of social networks and connections in search of permanent employment, remote opportunities or additional income.

**2. Freedom:**

Company employees increasingly opt for freedom and independence, flexible schedules and approaches in the organization of their work. Sideline employment turns into full-fledged projects for many generating greater income than their primary job, while freelancers offer more efficient and interesting solutions for employers. Thus, despite the stability of permanent employment, many employees prefer the risky, but attractive, strategy of freelancing with complete responsibility for deliverables. This trend revitalizes labor market competition, changes attitudes and approaches to acquiring new knowledge and skills, focusing the contractor on the final result, rather than busy work.

**3. Personal Motivation:**

Freelancers are far more motivated to self-development, honing and acquiring skills, in order to broaden their appeal. The result for employers is greater access to badly needed talent.

## 4. Compensation:

According to a poll conducted by the US Freelancers Union and Upwork among more than 7,000 working Americans[14], 32% of those polled noted a growing demand for freelancer services and an increase in the volume of tasks performed. According to contractors, an additional load means higher wages. 43% of the respondents feel confident about the growth of their personal income. An overwhelming majority of 77% reported that their income is at or slightly over the level of income attainable in corporations by way of traditional employment. 36% of the respondents are thinking about opting for a full-fledged freelance career.

## 5. Infrastructure Development:

This new labor force requires the creation and development of special infrastructure. For instance, the US is witnessing an increasing number of online labor exchanges, co-working spaces, freelancer teams, and cooperatives, as well as support and social benefit groups, such as Freelancers Union. Infrastructure grew as freelancing became more accepted/respected by both employers and employees. In the future, the need for more freelance talent will drive the increase/innovation of supporting infrastructure, which, in turn, will attract more talent and the cycle will repeat.

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14 // Freelancing in America 2015 https://www.upwork.com/i/freelancing-in-america/2015/

# Token Issue and Allocation

## UMK Token Description

The **UMK** token is an ERC20 token issued on the Ethereum blockchain.

**UMK** is a security and investment token. It gives its owners the right to pursue their investment interests.

**UMKA** will issue 180,000,000 tokens in one installment at the price of $0.1 USD per token.

**There will be no additional issue.**

Umka will issue

# 180,000,000 tokens

in one installment at the price of

# $0,1 USD per token

There will be no additional issue

## Revenue from UMK tokens for investors

The revenue of the platform from transactions (1% of the total amount) will be distributed between all issued tokens. Token holders will be rewarded according to the following formula:

$$T_1 = \frac{\Sigma_C \times C \times 0,01}{T_\Sigma}$$

**Where:**
$T_1$ — income from one token
$\Sigma_C$ — average transaction size
$T_\Sigma$ — the number of tokens a user owns
$C$ — number of transactions

| | | | |
|---|---|---|---|
| **Number of transactions per month** | 5,000 | 10,000 | 15,000 |
| **Number of transactions per year** | 60,000 | 120,000 | 180,000 |
| **Average transaction size** | 15,000 | 15,000 | 15,000 |
| **Platform's monthly volume of business ($)** | 75,000,000 | 150,000,000 | 225,000,000 |
| **Platform's yearly volume ($)** | 900,000,000 | 1,800,000,000 | 2,700,000,000 |
| **Number of tokens an investor owns** | 1,300,000 UMK | 1,300,000 UMK | 1,300,000 UMK |
| Investor revenue, $ USD | | | |
| **Monthly** | 5,417 | 10,833 | 16,250 |
| **Annually** | 65,000 | 130,000 | 195,000 |
| **in percentage terms*** | 65* | 130* | 195* |

*Enjoy a 30% discount when purchasing $100,000 USD worth of tokens.

## Number of projects

**Upwork**

# 10,000,000

Projects per year

# ~830,000

Projects per month

**Freelancer**

# 8,000,000

Projects per year

# ~670,000

Projects per month

# UMK token distribution

**Tokens will be distributed as follows:**

| Token distribution | % | USD | UMK |
|---|---|---|---|
| Sale | 55 | $9,900,000 | 99,000,000 |
| Reserve | 10 | $1,800,000 | 18,000,000 |
| Team | 10 | $1,800,000 | 18,000,000 |
| Advisors | 5 | $900,000 | 9,000,000 |
| Bonus | 15 | $2,700,000 | 27,000,000 |
| Bounty | 5 | $900,000 | 9,000,000 |
| Total | 100 | $18,000,000 | 180,000,000 |

Undistributed tokens will be controlled by the managing fund UMKA Foundation, they will also yield revenue in the form of a percentage from the platform's revenue. They will be available for purchase by anyone at their market price.

**Bonuses for investors**

Bonuses are additional tokens given to the investor besides the purchased tokens as long as the investor has purchased a certain minimal amount. Please note, bonuses are valid only during the token sale.

| +10% | +15% | +20% | +25% |
|---|---|---|---|
| $5,000 | $10,000 | $50,000 | $100,000 |

# Funds allocation

**Token sale fundraising goals**

| Soft cap | Hard cap |
| --- | --- |
| **1,000,000** | **10,000,000** |
| USD | USD |

**ICO funding is allocated as follows:**

| Funds allocation | % |
| --- | --- |
| **Marketing** | **45** |
| **Development** | **16** |
| **Coverage of ICO expenses** | **8** |
| **Operational expenses** | **4** |
| **Bonus for founders and team** | **5** |
| **Community development** | **10** |
| **Reserve fund** | **12** |
| **Total** | **100** |

To make fund allocation as transparent and clear as possible UMKA's team will regularly post reports funds distribution on the UMKA website: http://UMKA.city/

**Token sale dates**

May 1, 2018 — closed presale of UMK tokens;

June 1– August 1, 2018 — the first stage, public sale.

November 1, 2018 – January 1, 2019 — the second stage, public sale.

# Road Map

## Q1 2017

Idea, Concept
development

## Q2 2017

Development of an
interface demo version
for internal testing
on iOS and Android

## Q3 2017

Concept testing
in target groups

## Q4 2017

Concept follow-on
improvement in
accordance with new market,
technological trends and
testing results

## Q3 2018

AgileSC™ follow-on improvement and testing
Blockchain and interface follow-on improvement
    and development
Open alpha testing of the blockchain and AgileSC™
Implementation of the functionality:
    project groups, group chats
Hackathon

## Q2 2018

Token pre-sale: May 1 - May 31,  2018
Testing of the app in target groups
Start advertising campaign
Token sale starts: June 1, 2018

## Q1 2018

Platform announcement
Token sale preparations

## Q4 2018

UMK token listing on exchanges
Integration of third-party services
Implementation of the functionality: digital passport,
    testing systems, expert arbitration
Adding operation with crypto and fiat currencies

## Q1 2019

Final release of the UMKA platform
Full-fledged advertising campaign

# A Message from CEO Timur Akhmedzhanov

The idea for this project was born when I realized that at different stages of my life I have encountered problems that became solvable only now thanks to the latest technology.

Both as a student and after graduation it was hard find work, because employers often required knowledge and experience that I could not get formally in the university. When I did work there was no guarantee I would be paid. Later, when I hired employees, I could not be sure they had the skills and experience they claimed or would deliver quality work on time and in budget. Actually, every person, whether worker or boss, in and out of IT has faced the same problems.

UMKA is the product of my own experience, my mistakes and the hardships I have been through. I am convinced that this universality makes the project relevant. At the base of every concept, idea and detail behind the project lies deep understanding of the issues that members of the freelance market face, as well as knowledge of how to solve these issues.

We have spent a lot of time studying the issues of the modern labor market, especially its IT sector, and we have spent nearly as much time developing and testing our concept. We can now clearly see that UMKA will be able to solve the aforementioned issues.

Why now? Simply because previously the technology necessary for this project didn't exist.

Why us? Because every member of our team is a professional in their own field, as well as in the new blockchain & cryptocurrency industry.

We have come a long way, we have worked hard, and we still have lots more to do, but we are prepared for this. We hope that you join us on our journey.

**Sincerely,**
**Timur Akhmedzhanov**