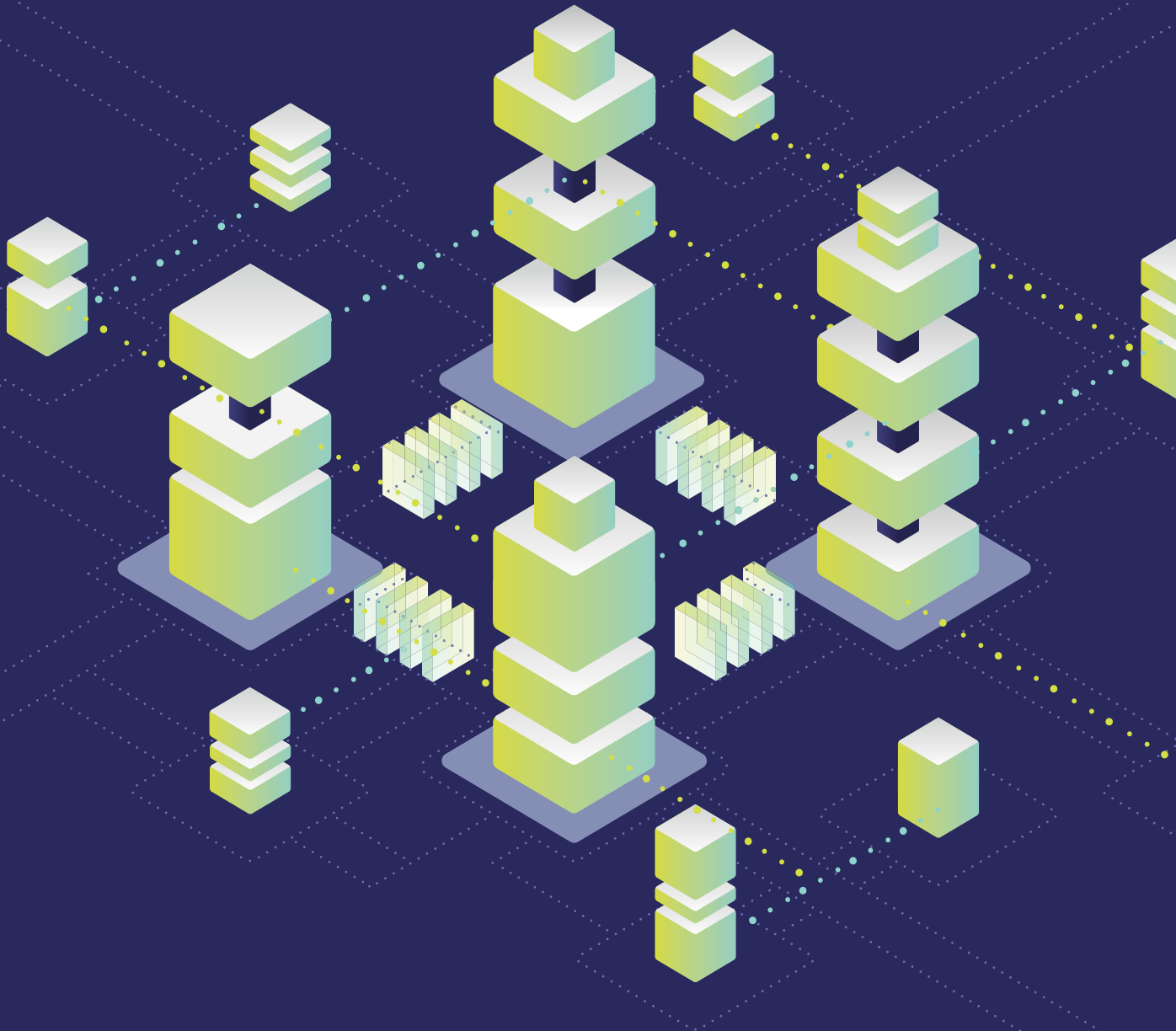


Fincor



Next Generation Ecosystem of Smart Financial Services

TAILORED FOR FINANCE PROFESSIONALS,
SUITED FOR EVERYONE

Contents

CEO's word	3
Executive Summary	5
1. The Problem: Banks are expensive and inefficient, contemporary financial blockchain projects alike	13
1.1. Old-School banks: expensive, slow, non-client-oriented	15
1.2. Financial blockchain-based solutions: no attention to security, no extra mile for users	17
1.3. POW blockchain platforms: slow, unscalable, too expensive	19
2. Fincor: The Solution	21
2.1. Smart Trading, Smart AML, Smart Security	22
2.2. Safety First	23
2.3. Smart Exchange	26
2.4. Crypto, fiat, gold, margin, futures trading	31
2.5. Crypto backed P2P lending	33
2.6. Investment Trusts, Institutional Investment Tools And Vaults	34
2.7. Smart Letters Of Credit	35
2.8. Worldwide Payment Cards & Mobile Payments	37
2.9. Fincor Blockchain	37
2.10. Transparency and compliance	45
2.11. UI/UX 24/7 AI VA	46
3. What's Done So Far	47
3.1. Smart Exchange	47
3.2. "Secure Access"	47
3.3. AI trading bots	48
3.4. Fincor blockchain with native FCP consensus protocol	49
4. Use of Funds & Investments	50
4.1. Capital needs	50
4.2. Use Of Funds	50
4.3. Investments by service line	51
5. The Road Map	52
6. The Team	53
7. Legal Disclaimer	55



CEO's word

Skirmantas Jareckas

“You won’t hear this often, but after serving two decades in the banking industry, I am disappointed with the traditional finance market.

For centuries brick-and-mortar finance organizations invested solely in their service portfolios, infrastructure and physical branch networks. However, once entered in the new millennium they forgot to adjust to the ever-changing needs of the many. The many who expect clear and simple customer experience both online and offline. The many who work day and night and thus cannot afford a 10AM-to-4PM service provider. The many who have struggled their way to build small-to-large businesses, yet they keep fighting with their financial partners for adequate financial service, like fees, customer support and transaction execution speed.

I discovered blockchain almost ten years ago while exploring ways of delivering new added value services to my customers. To understand the prospects of the technology I became its user myself – as a crypto investor. However, I realized that many crypto trading platforms were built to capture short-term gains instead of developing long-term solutions that would truly revolutionize the finance industry. Back then, I also struggled with the conservatism of the banking sector – the decision-making process and the cost of integrating new technologies were too time and resource consuming for a speedy adoption of blockchain solutions.

With this in mind, Fincor’s business development team, together with talented blockchain developers and security experts, prepared a 3-step plan of launching a smart blockchain-based financial services ecosystem. The plan with the most immediate impact but no compromise on our long-term vision – is the creation of probably the industry’s fastest and smartest ecosystem of financial products. Further steps include a smart crypto exchange, an ecosystem of smart financial services and our native, world’s fastest, financial blockchain.

Development of the ecosystem started with the launch of our crypto exchange which offers a phenomenal user experience for both beginner and professional crypto traders, and is based on our revolutionary “Secure Access” technology. We also invested in our Artificial Intelligence lab which already developed Fincor’s very first self-learning trading bots. Our bots, in private tests, have continuously outperformed the crypto market’s returns over 2018. Upcoming, the AI team will also deliver an enhanced AI system, covering anti-money laundering checks and improved cybersecurity. Our exchange will also have a decentralized version which will appeal to the people who believe in 100% decentralization.

Further on, as a 2nd step, the exchange will be supplemented with new financial services: peer-to-peer crypto lending, smart letters of credit, payment cards, investment funds thus forming a financial services ecosystem which will meet the needs of both professional traders, businesses and

ordinary users for modern, easy-to-use financial tools. After all, the majority of existing blockchain-based financial services are designed by people from outside the finance industry. Technically, many of them did a really good job – as developers, but not as business developers. Unscalable for mass adoption, poor user experience, limited service range, little-to-no attention to asset security.

However, we are here to do sound business. The core of our team are people with long-standing executive experience and proven track record in B2C and B2B finance, as well as top-level blockchain developers and outstanding cybersecurity professionals who have been responsible for national and private infrastructure security for over 20 years. We know how to build scalable organizations, leveraging efficiencies across multiple financial services to deliver revenue growth synergies, as well as increase customer loyalty.

Our combined expertise will lead us towards the 3rd stage – our native blockchain. It will allow us to increase the efficiency of the entire Fincor financial ecosystem, as well as open new possibilities for the global crypto community. It will solve the essential flaws of Bitcoin, Ethereum and other current protocols: severe lack of speed, scalability limits and excessive fees. It will allow us to continuously expand transaction speed, decrease transaction costs for end-users, as well as create a cost-efficient and highly scalable environment for third-party blockchain projects.

Besides providing dedicated focus to user experience, Fincor brings military-grade security to the masses. All of our customers will be able to use our “Secure Access” technology for crypto trading in the unhackable environment. Fincor will become a revolutionary provider of easy-to-use, secure, inexpensive and fast financial services. Hope you will join us in transforming the finance industry.”



Executive Summary

Fincor will fuse business development experience from the banking industry with the technological potential of blockchain solutions. With decades of professional background in these areas, the Fincor team will revolutionize financial markets by delivering secure and Artificial Intelligence-powered solutions, covering a smart crypto exchange, a full-fledged ecosystem of financial products and our native, world's fastest, financial blockchain. We developed a 3-step plan which will allow Fincor to realize its full potential in due time while generating revenue as soon as possible. The plan includes the already launched secure and AI-powered exchange, followed by the development of an ecosystem of financial products (step 2) and the introduction of our native blockchain (step 3).

STEP 1: Smart Exchange & OTC

<2 min reading

Excellent work starts with extensive preparation. We already developed and launched an alpha version of our smart crypto [exchange](#)* together with our "Secure Access" technology. Additionally, we have invested in our Artificial Intelligence laboratory. Our AI team has already developed and tested our first AI trading bots, which generated positive returns beating overall market performance. Unlike typical bots, our AI bots will execute user-defined actions, whilst also analyzing the performance of other traders, as well as including external triggers, like breaking news, industry reports and market fluctuations. This will allow the system to advise traders on potential opportunities or alarm them of potential risks.

In later development steps, our AI laboratory will also deliver a system to conduct anti-money laundering and know-your-customer procedures. Additionally, it will help us with continuous system analysis for potential vulnerabilities, as well as ensure timely cyberattack detection with deployment of initial response actions. The AI system will also provide support to the parties of the P2P lending platform, as the system will conduct a background check on applicants and calculate their credit ratings.

We deliver new safety standards by introducing military-grade security to regular users as well as our corporate clients. Here you can visit our dedicated security [page](#)** where we demonstrate Fincor's "Secure Access" technology. You can try it for yourself. With decades of experience in banking and cybersecurity, our team will integrate security protocols which will meet and exceed those used by European banks.

On top of dedicating 10% of our budget to the security of the entire ecosystem, including the centralized exchange, we will develop a decentralized exchange thus meeting individual exchange preferences of all clients. The storage of crypto assets will be distributed between all user's devices (decentralization). This will bring the security of assets to an exceptional new level.

* <https://exchange.fincor.io/>

** <https://fincor.io/en/security>

Fincor puts great emphasis on user experience. Many existing crypto exchanges may be well programmed for an ordinary trader though, they are too complicated and inconvenient. With help from our top UI/UX designers, we are developing a service which is easy-to-use and provides a great user experience thus significantly contributing to the client loyalty. You can already start using our exchange and check our exchange experience [here](#)*

Meanwhile we will launch the over-the-counter service (OTC). The service will allow traders to acquire or sell mid-to-large amounts of all popular cryptocurrencies based on fixed, pre-agreed rates (as opposed to fluctuating rates on the exchange). OTC deals will also provide trading parties with higher privacy since OTC transactions are not recorded in order books. This is particularly crucial to institutional and larger individual traders who don't wish to trade large amounts of crypto assets in multiple smaller deals which are vulnerable to rate volatility and slippage on the open market (exchange).

STEP 2: The ecosystem of financial products

Crypto-backed P2P lending

To offer much more than just a user-friendly cryptocurrency exchange, Fincor will introduce a peer-to-peer cryptocurrency-backed lending platform. The platform will become an integral part of the rocketing global P2P lending market which is expected to grow from \$26b in 2015 to almost \$900b by 2024.

With tokens and coins as collateral, all users will be able to apply for fiat currency loans. Terms and conditions of a loan will be set in a smart contract which will automatically release the collateral once the loan is paid. Or, in case of the borrower's default, transfer the collateral to the lender.

To minimize default risks, Fincor's AI system will conduct a background check on the applicant, including credit history provided by national credit bureaus, and subsequently calculate the applicant's overall credit rating. This will provide potential lenders with a stronger understanding of the borrower's ability to fulfill his financial obligations.

Launching a P2P lending platform will allow us to provide traders with extended investments tools thus motivating a larger portion of crypto traders to shift onto Fincor exchange and substantially decrease joint user acquisition costs for both platforms.

Crypto, fiat, gold, margin, futures trading

Existing crypto exchange platforms offer scarce trading options, often limited to crypto/crypto trading pairs only. This perfectly reflects the mindset of many exchange developers – why invest more if the existing service range is perfectly fine. Also, many exchanges avoid additional trading options due to extensive tax-related issues, often covering regulations of multiple countries.

* <https://exchange.fincor.io>

In other words, to build a wide range of trading solutions not only requires investments into more advanced technical infrastructures, legal and regulatory frameworks, but also hands-on experience in running such operations.

Having launched similar services for traditional banking customers, we know the importance of introducing more freedom for users with diversified trading options. Fincor will provide not only crypto/crypto but also crypto/fiat and crypto/gold trading. Also, for those wishing to diversify their investment instruments, we will offer crypto/fiat and crypto/crypto margin trading, as well as crypto/fiat and crypto/crypto futures trading.

Investment Trusts and Vaults

Supplementing extended crypto/fiat/gold trading options, we will introduce investment trusts (funds). Following relevant regulatory approvals, our crypto investment trusts (funds) will accumulate resources from multiple investors and invest these into single and multiple cryptocurrencies, micro-, mid- and large-capitalization cryptocurrencies and different categories of cryptocurrencies and crypto tokens.

Considering the rising interest of investors towards blockchain projects - over \$637m invested in blockchain projects by leading venture capital firms and hedge funds in Q1 2018 vs. \$496m throughout the entire 2017 - Fincor's trusts will be a perfect opportunity for institutional and other investors to benefit from the crypto market. It will be particularly useful for investors with limited experience in cryptocurrency trading since trading will be conducted by our experienced crypto traders supported by our AI trading bots and under supervision of professional fund managers.

This option, coupled with advices from our own AI trading bots, will help our traders, both institutional and private, to further expand their investment opportunities.

Fincor users will also have an opportunity to create and use our Institutional and Family vaults – multisignature (multisig) accounts, which ensure that multiple parties within an organization have control over the trading of their crypto assets. For friends, families and other user micro-communities, Family vaults will allow you to invest and run a joint crypto wallet. It will also offer persons of trust access to the vault, in case one of the users loses one's key or otherwise can no longer use the assets.

Smart contract-based Letters of Credit

Up to six months for the buyer to receive the payment and up to 15% fees for the seller to get his bank's support – that is too long and too expensive to conduct international trade in the 21st century.

With this in mind, we decided to develop a service of smart contract-based Letters of Credit. Most of the paperwork will be moved online with near instant transfer between buyers, sellers, logistics providers and other parties. This will not only save time as funds and documents will be released right after delivery of goods, but will also eliminate the need for banking organizations (including their sky-high fees) as intermediaries.

Payment cards & mobile payments

For the sake of user convenience and with an aim to deliver all essential financial tools within a single ecosystem, we will provide an option of linking Fincor fiat IBAN accounts with EMV (Europay + MasterCard + VISA) standard payment cards, as well as mobile apps for contactless payments based on Near-field communication (NFC) protocols. This will eliminate an excessive number of intermediaries and significantly facilitate the process of acquiring real-life goods and services with crypto.

STEP 3: Blockchain

~2 min reading

The first major blockchains, including Bitcoin and Ethereum, have done their job – they proved that almost any business or industry can benefit from the blockchain technology by decentralizing and automating various business and even government-level processes. By recognizing more blockchain use cases beyond the initial applications, such as a means of money transfer (cryptocurrencies) or asset ownership and funding (ICOs/STOs), pressure built on protocol developers to find new solutions to the high costs and scalability limits of the initial blockchains. Our solution is to develop our native blockchain with our proprietary FCP (Fincor Consensus Protocol) consensus protocol.

Why are we doing this? After carefully analyzing many blockchain protocols, we've recognized the need to create our native blockchain. Mainly because many currently deployed protocols have severe speed and cost limitations with significant scalability issues when applied to the high throughput requirements of the financial industry. Also, the usually politicized and dubious process of how the updates are decided upon, planned and implemented, doesn't add trust that progress will happen at the pace which is needed or expected. We don't politicize, we digitize.

That's why, instead of using existing platforms with their speed, scalability, cost of transaction and execution flaws, we decided to create a blockchain with our native consensus protocol FCP – which is based on the Federated Byzantine Agreement, supplemented by sharding technology. Below we describe the key benefits with a more detailed description and analysis available in our Blockchain Research Paper.

Benefits of FCP, based on the Federated Byzantine Agreement, supplemented by sharding technology:

- our blockchain will be liberated from speed caps allowing us to increase transaction velocity significantly to approximately 10,000 transactions per second with the first protocol deployment. After integrating dynamic sharding technology, the speed will grow further and will exceed the one of global payment systems;
- it will also allow us to implement nearly costless transactions within the ecosystem and provide much more favorable conditions for third-party decentralized applications (dApps) developers and Internet of things (IoT) applications;
- our FCP-based blockchain will provide optimal security by protecting the blockchain from fraudulent participants, thus minimizing cyberattack risks, which are typical for PoW blockchain platforms;

- and finally, to use Fincor blockchain benefits - near costless transactions, lightning fast payments, sophisticated smart contracts - you don't need to be a developer anymore. Anyone will be able to create and execute smart contracts via user interfaces and apps, provided natively by Fincor or by the third-party developers. For blockchain to be adopted by every business - from mom-and-pop stores to global corporations - ease of use is an absolute necessity.

Once the blockchain is up and running, we will move the entire Fincor ecosystem on it, gaining additional speed and security.

Team



Skirmantas Jareckas, co-founder
CHIEF EXECUTIVE OFFICER / [in/skirmantasjareckas](#)

Business management professional with more than 20 years of executive experience in treasury and financial industry. Under his guidance as the CEO and the Chairman of Board, one of the leading banks in the Baltic States – Citadele – was named the Best Customer Service Provider among Lithuanian banks in 2015 & 2016. Skirmantas and his team also introduced new concepts of banking space, e.g., by sharing it with one of the region's largest coffee shop chains.



Tomas Liesis, co-founder
CHIEF BUSINESS DEVELOPMENT OFFICER / [in/tomasliesis](#)

Tomas has an exceptional leadership skills. Over ten years in various business he has successful record in major investment and business projects. Tomas has successfully executed long-term organizational strategic business and sales goals, built key customer relationships, identified business opportunities, negotiated and closed business contracts.



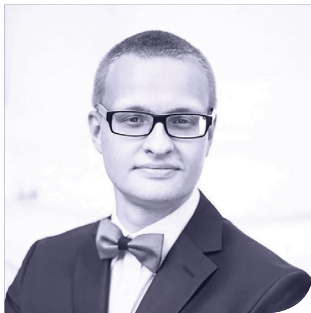
Michael Osterloh
CHIEF OPERATING OFFICER / [in/michaelosterloh](#)

For almost two decades Michael has been working in various technology and finance companies, including one of the world's leading exchange organizations Deutsche Börse Group. While holding various executive positions, including those of CEO, Michael proved to be a top-class manager of both strategic and daily operations, as well as a visionary developer of new business solutions.



Mindaugas Matulionis
CHIEF SECURITY OFFICER

Being a high-level cybersecurity expert Mindaugas' professional background includes 20+ years of developing, integrating, maintaining and improving security systems for governmental and private telecommunications networks. Having held various positions, including the one of an authorized consultant to the EU Parliament on areas of telecommunications and security, Mindaugas holds exceptional expertise which will be used in building security systems for Fincor's physical and digital infrastructure.



German Stogniiev
CHIEF TECHNOLOGICAL OFFICER / [in/germanstogniiev](#)

As a C-Level executive German has been working within various blockchain projects and AI startups, including the development of cryptographic information protection tools, e-commerce, autonomous drones, multispectral cameras, AI cloud platforms and blockchain-based payment systems. At Fincor, German has built a team of developers leading the Fincor technology development for all key service areas: crypto smart exchange platform, P2P lending platform, OTC market, crypto vaults, native blockchain and much more.



Vladislav Polikarpov
LEAD TECHNICAL ARCHITECT / [in/vladislavpolikarpov](#)

More than six years experience of full stack developer. He is a lead technical architect who works with multiple projects and teams on problems that require broad architectural thinking. Vladislav is responsible for leading the technical design of services and systems, justifies and communicates his design decisions. At Fincor, Vladislav is bridging the gap between technical and software architecture. His mission is to translate business problems into technical designs, to create an optimal design through an iterative process, aligning the user need with the system requirements and organisational objectives.



Evaldas Petraitis
CHIEF LEGAL OFFICER / [in/evaldaspetraitis](#)

An experienced lawyer with years of practice in one of the Baltic states' leading law firms, Evaldas specializes in financial regulation, with a particular focus on venture capital markets. He is also one of few national experts who specialize in the evolving blockchain regulation. Evaldas will lead Fincor's compliance team which will ensure that the ecosystem meets all requirements and standards set by the Bank of Lithuania and other national and European regulators.



Lukas Pultaražinskas
TAX ATTORNEY / [in/lukaspultarazinskas](#)

Having worked at one of the Big 4 - PwC, - as well as Lithuania's Customs Department and one of the region's leading law firms, Lukas possesses an extensive expertise in European tax management practices and regulations. Together with legal and finance teams, Lukas will ensure Fincor's tax transparency and compliance with national and international tax laws.



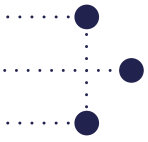
Roman Dushkin
HEAD OF AI LABORATORY / [in/roman-dushkin](#)

Being an Engineer-Mathematician, for almost 20 years Roman has been working in various large-scale projects related to Artificial Intelligence and automated management systems. Roman is a member of several Artificial Intelligence, Cryptocurrency and Blockchain-related associations, he also held numerous leading positions in private and governmental organization being responsible for development and integration of innovative and AI-powered services. At Fincor, Roman leads a team of AI scientists who already developed Fincor's own trading bots.



Aurimas Baltušis
HEAD OF UI/UX DESIGN / [in/aurimasbaltusis](#)

User experience and branding specialist. For the last 13 years Aurimas works with various web applications and product developments including banking system interfaces, payment and trading platforms, KYC (Know-Your-Customer) processes and booking systems. Aurimas leads an experienced team which will implement an exceptional user experience and design to Fincor's ecosystem.



1. The Problem: Banks are expensive and inefficient, contemporary financial blockchain projects alike

~1 min reading

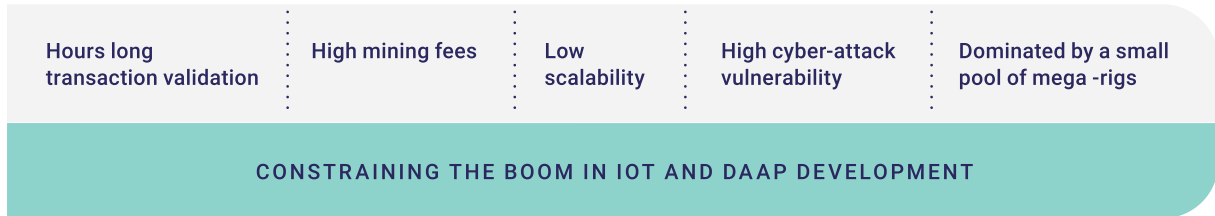
A couple of decades ago, breaking news and major stories run by journals and newspapers were reaching households once a day or even a week. Let alone travel which could last for months back in the days of King George V.

Luckily, humanity is evolving (at least in some areas), and today it takes mere minutes to get the news and hours to reach popular destinations worldwide. Unfortunately, that's hardly the case for the global banking industry which keeps sticking to its centuries-old rules, as well as outdated efficiency and customer experience standards.

Meantime, the first iteration cycle of blockchain projects is coming to an end. While pioneering the industry, existing exchanges and similar blockchain-based service providers lack functionality, security against fraudulent actions and cyber attacks, and are just too complicated for a wider, not tech-savvy audience.

However, that's not the real problem. The essential flaw of blockchain-based projects is within the existing blockchain platforms. Proof-of-Work-based blockchain protocols are just too expensive and don't provide scalability to transform marginal blockchain services into universal and daily tools like credit cards or smartphones. High fees and latencies of PoW blockchains limit the development of a wider range of decentralized apps for finance, insurance, medicine, facility management, logistics and many other industries.

First-Gen Blockchains



Banks



Blockchain Projects



1.1. Old-School banks: expensive, slow, non-client-oriented

IT'S A BLACK HOLE OF TIME, MONEY AND SADLY, TREES

International bank transfers still take up to 5-6 business days (or even up to two calendar weeks) to complete. And what about 9:30 AM to 4:30 PM business hours? It's as if they literally wait for customers to go to work and close just before they head home. Surely, one could argue that more and more people switch to e-banking systems. But when was the last time you enjoyed using your bank's online office? Let's be honest, it's usually too complicated, too old-fashioned and too inconvenient.

Despite all that, this is the industry which manages 80-90 trillion USD in various financial assets¹. Also, these numbers are due to almost double in the next decade as millennials, and the generation Z are taking over the wheel of the world economy.

Meanwhile, millennials, who together with generation Z will represent the absolute majority of the workforce in less than five years, are clearly in need of convenient and user-friendly e-banking solutions, since they are 3x times more likely to open a new account with their smartphone rather than in person².

Are traditional banks ready to change, one might ask? According to PwC, only a few, since less than 20% of retail banking executives feel well-prepared for the future. This is why, amongst other reasons, the majority of these executives (55%) see non-traditional banking players as a threat³. Thus, no wonder that some Central Banks, pressured by traditional financial institutions and tech ignorance across the board, choose the path of resistance, but not one of guidance when it comes to blockchain and digital money.

The situation above escalates with rising security issues. Traditional banks, in essence, are strongly centralized which means one cyber attack can affect thousands and millions of customers. For instance, the 2018 attacks on the Canadian Bank of Montreal and the Canadian Imperial Bank of Commerce's Simplii Financial (data theft of 90,000 customers⁴) and the Mexican Bancomext (attempted theft of 110m USD⁵), the 2017 attack on the Italian UniCredit (data theft of 400,000 customers⁶), as well as the infamous 2016 attacks on the Bangladesh Central Bank (theft of 80m USD⁷) and a series of Indian banks (over 3 million payment cards compromised⁸).

1 PwC: <https://pwc.to/2jhWMHX>

2 American Bankers Association: <https://bit.ly/2uryq5V>

3 PwC: <https://pwc.to/1m7XZ3C>

4 CSO: <https://bit.ly/2kFmlnv>

5 Bloomberg: <https://bloom.bg/2Ja7Gyr>

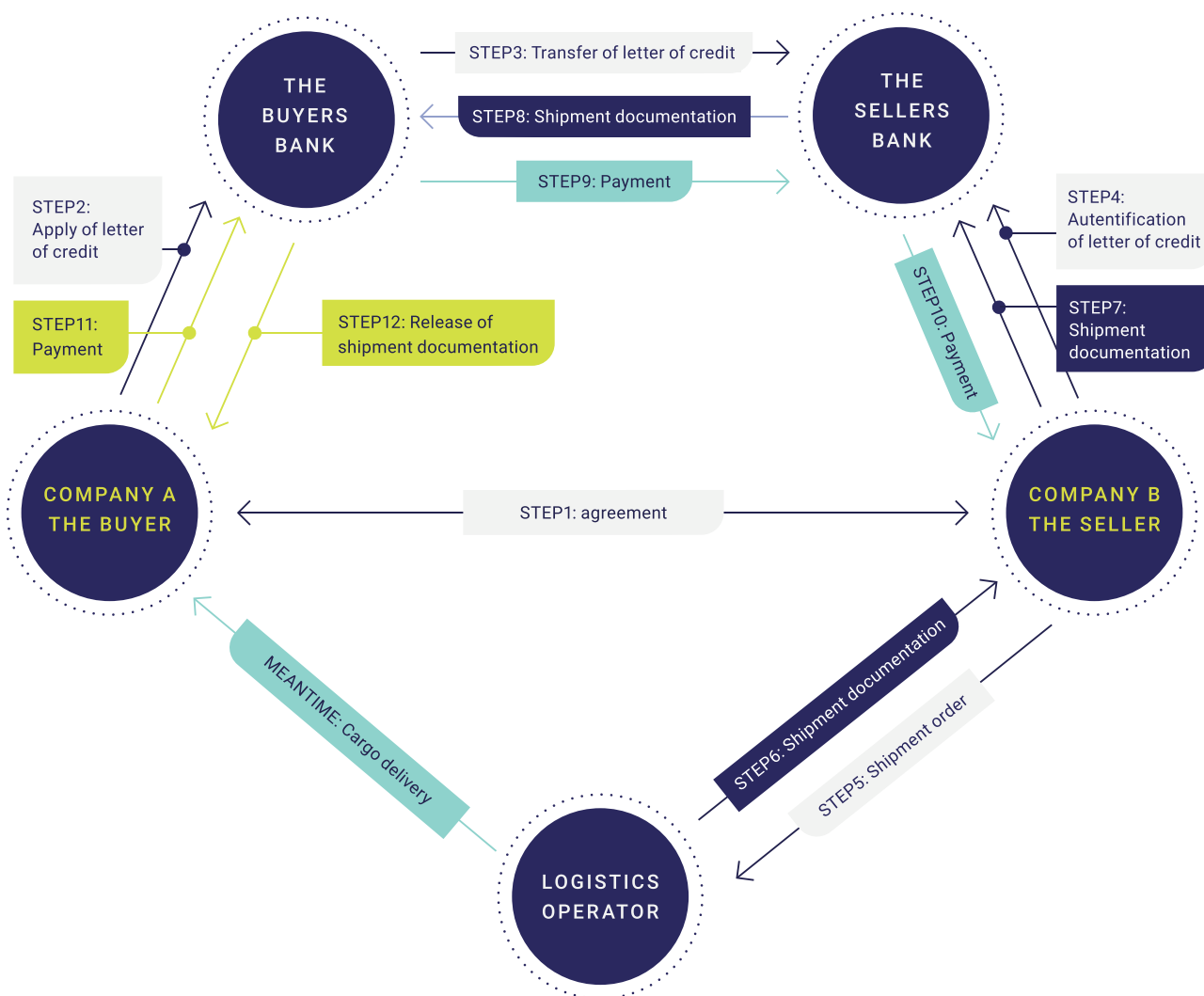
6 BBC: <https://bbc.in/2l8N5WC>

7 Reuters: <https://reut.rs/2CMDGSo>

8 Voice of America: <https://bit.ly/2K4Ud8n>

However, despite an increasing number of safety issues, traditional banks are still being relied upon in many areas. A perfect example – international trade. Banks act as intermediaries in up to 15% of all export transactions worldwide – by issuing Letters of Credit (LC) banks support transactions worth of over 1,000,000,000,000,000 (yes, one trillion) USD each year.

The aim of a Letter of Credit is to have a reliable mediator between a seller and a buyer which guarantees that the seller receives funds upon the delivery of the order to the buyer. A rather simplified chart of the process looks like this:



Looks complicated? It's a black hole of time, money and, sadly, trees (the origin of paper). The entire process from the buyer's application for a Letter of Credit (LC) , up to the seller receiving the funds may take several months, regardless of the shipment duration. The LC application review alone can last up to several weeks. All this– for a support fee of up to 15% of the contract value.

Another example of sky-high fees is international fund transfer. In the B2B segment, companies annually pay approx. 300b USD in fees for up to six business days-long international transfers⁹. Too expensive and too slow for a globalized economy.

9 McKinsey & Company: <https://mck.co/2sBCkae>

Meanwhile, in the B2C segment, the situation is not that much different. According to the World Bank, the global average cost of sending 200 USD was 7.1 percent in the beginning of 2018 with Sub-Saharan Africa being the most expensive place to send money to (~9.4 percent¹⁰ transfer fee).

Yet, the demand for international money transfer keeps growing. In 2017 alone, immigrant workers sent almost 466b USD to their low and middle-income home countries. Largest recipients of such funds (remittances) were India (69b USD), China (64b USD), the Philippines (33b USD), Mexico (31b USD), Nigeria (22b USD), and Egypt (20b USD). In 2018, the figures are expected to grow by an additional 4%, according to the World Bank.

Fincor's solution:

A full-fledged ecosystem of financial products which will include solutions for both individual and institutional clients. Artificial Intelligence-powered exchange with OTC service, enhanced cybersecurity, near costless inter-system fund transfers, lightning fast European payments (SEPA), smart contract-based Letters of Credit, payment cards and smartphone payments, as well as a decentralized exchange and many more.

1.2. Financial blockchain-based solutions: no attention to security, no extra mile for users

"ANOTHER WEEK, ANOTHER BITCOIN HACK, ANOTHER HUGE PRICE DROP"

<4 min reading

Let's be honest: traditional banks are not the only ones that have flaws.

Only a few blockchain-based projects – the ones that didn't disappear like a Nigerian prince after cashing out their ICO funds – have the potential to deliver the expected balance of reliability, security and functionality. Some of them have outstanding tech teams but lack people with an actual background in finance, business development and marketing.

For sure, there are some decent finance-related blockchain projects in the market, but they can neither offer a user-friendly interface and intuitive design nor have a clear understanding of the needs of the broader, not tech-savvy customer base.

Taking a closer look, some of the existing digital currency exchanges are really not that far ahead of traditional banks regarding cybersecurity. Most exchanges store all, or most, of their clients' cryptocurrency online, on their servers ('Hot storage'). The June 2018 attack on a South Korean centralized exchange resulted not only in the loss of approx. 30% of traded coins, but also a drop in prices of several major digital currencies, including Bitcoin (BTC). As perfectly pointed out by Wired: "Another week, another bitcoin hack, another huge price drop"¹¹.

¹⁰ World Bank: <https://bit.ly/2HJCvcz>

¹¹ Wired: <https://bit.ly/2JKo5q7>

The main reason why exchanges hit the headlines so often is the fact that many exchange developers avoid investing extra resources into the enhanced security of their physical infrastructure (e.g. servers). As a result, a single system's breach leads to asset and personal data loss of many users. And existing exchanges surely do not invest in insurance in order to minimize at least their hot wallet losses.

Also, many cryptocurrency exchanges don't go the extra mile for their clients and don't provide an option to use their e-wallets in real life directly. Meaning, clients are required to use third-party services to convert digital money into fiat currencies and transfer them to their IBAN accounts (most probably, IBAN accounts in a bank). All of these extra steps add not only inconvenience for users, but also a substantial amount of exchange, withdrawal and fund transfer fees.

Then there is an issue for businesses releasing tradable tokens which need to pay extraordinary fees or substantially invest into winning the public vote to get listed on exchanges. Such practices force dApp developers with tradable tokens to seek exchanges with more favorable conditions regarding both fees and crypto/fiat exchange options.

In the meantime, we shouldn't forget about institutional investors. Crypto/crypto pair trading was a nice start, but today's market expects something more than that. It needs a significantly extended range of trading options.

It also needs more reliability and security. People are hacked too often and there's no plan B in such cases. Moreover, the traditional "one account = one key" standard doesn't meet the needs of another important actor – institutional investors who are increasing their presence in the crypto trading each year.

There are peer-to-peer (P2P) lending projects which directly connect lenders and borrowers. The latter can apply for a fiat money loan (USD, EUR or any other currency) with a cryptocurrency (Bitcoin, Ether or other coins and tokens) used as collateral. As in any credit-related business, the lenders – those who bring and lend their capital – are the cornerstone of any P2P lending platform.

Still, many P2P lending platforms lack basic risk mitigation instruments like credit ratings of borrowers. Surprisingly, to get a small loan some of the platforms require only minimal or no KYC (Know-Your-Customer) procedures at all. And that's considering that already in 2015, the inter-governmental Financial Action Task Force (FATF) named small wire transfers as one of the key terrorism financing methods¹².

By the way, have we mentioned that anti-money laundering and know your customer (AML/KYC) procedures in some traditional financial institutions still take up to a week or more? It might have something to do with endless paperwork and communication via... fax.

Fincor's solution:

A revolutionary range of blockchain-based financial services as part of our financial ecosystem. Crypto/fiat/gold trading, margin and futures trading, crypto-backed P2P lending platform, multisig Institutional and Family vaults, crypto asset insurance.

¹² FATF: <https://bit.ly/1AOrZlw>

1.3. POW blockchain platforms: slow, unscalable, too expensive

YES, SLOW, UNSCALABLE, EXPENSIVE

~3 min reading

Blockchain comprises of blocks which are 'constructed' by miners – individuals and businesses which invest into ASICs, GPUs and other hardware to solve computational puzzles. The more powerful the equipment (a rig or a pool of such) you have, the higher are the chances that you will be the first to unlock the computational challenge and thus create a new block and introduce it to the entire network for verification (Proof-of-Work, PoW).

But here's the first issue – each time you play a video game, your PC consumes substantially more energy as it needs to power GPU for maximum performance and vent it to prevent the system overheating. The same goes for the block mining process with the only exception that energy consumption jumps to nationwide levels. For instance, miners consume more than 70 TWh of energy to mine Bitcoin alone. For a better understanding of the scale, the amount of energy used by miners worldwide equals the annual amount of electricity consumed by entire Austria¹³.

All this energy generates an impressive utility bill of over 3bn USD annually¹⁴ which is eventually covered by non-mining users (e.g. smart contract users, dApp developers, traders etc.). And even though only five mining mega pools control $\sim \frac{2}{3}$ of all mining capacities, the competition for block mining is as high as ever, meaning miners will keep building even more powerful rigs and consume even more energy. Moreover, the higher the production cost, the more expensive the services for the end users.

And then there is the second issue – transaction capacity. Bitcoin network processes only 7 transactions per second while the validation process can take hours. Ethereum network operates with a slightly better performance, but 15 transactions per second are still not enough to make it a universal platform with millions of instant operations per day.

The very same issues limit the fusion of blockchain and Internet of Things technologies (IoT). It's no secret that IoT is still rather vulnerable to cyber attacks, e.g. the case of a casino's highly protected database being hacked via a simple thermometer in the lobby¹⁵.

The IoT industry sees blockchain as a natural solution for IoT to make a more secure and cyber-resistant network. After all, approx. 20% of all IoT deployments in 2019 will have basic levels of blockchain services enabled¹⁶. The growing number of blockchain-enabled devices moves IoT industry towards a new era – an era of smart contract-based micropayments where IoT devices will be able to conduct automated payments for essential services, including utility services, repairs and grocery deliveries.

13 The Wired: <https://www.wired.co.uk/article/bitcoin-mining-energy-consumption-new-york>

14 Digiconomist: <https://digiconomist.net/bitcoin-energy-consumption>

15 Business Insider: <https://www.businessinsider.com/hackers-stole-a-casinos-database-through-a-thermometer-in-the-lobby-fish-tank-2018-4?IR=T>

16 IDC: <https://www.idc.com/research/viewtoc.jsp?containerId=US40755816>

However, due to the aforementioned limitations of PoW blockchain protocols, interconnecting myriads of IoT devices and processing their automated micropayments may eventually result in malfunctions and faulty data, since the blockchain network won't be able to process information exchanges and/or execute smart contracts in real time.

In other words, there is just no room for growth with many existing platforms. For blockchain to become a solution with a global reach and application, it needs to offer wider and faster capacities, as well as be more economically efficient.

Fincor's solution:

Our native, world's fastest, financial blockchain, based on FCP Consensus Protocol and sharding technology. It will allow us to significantly increase transaction volumes and introduce a highly scalable and cost-efficient environment for IoT, Fincor's proprietary services and third-party developers. Fincor blockchain is built for mass adoption with powerful yet easy to use smart contracts interfaces and apps provided natively by Fincor or our third-party developers.



2. Fincor: The Solution

~2 min reading

We don't make empty promises, instead we deliver results. We already developed and launched an alpha version of our AI-powered crypto exchange. That's just the first step in our 3-step plan towards creating, most probably, the industry's fastest and smartest ecosystem of financial products. A 3-step plan which includes a smart crypto exchange, an ecosystem of smart financial services and our native, world's fastest, financial blockchain.

Over the decades in the finance industry, we've come to a clear understanding that:

- what grows fast comes down fast (dot-com, real estate, recent crypto bubbles). That's why we focus on stable business development and organic growth with revenue generated from our services. In other words, we focus on long-term development rather than on quick returns like most exchanges which mostly work in the gray zone;
- many crypto and other tech projects rely on public opinion, being launched when the market feels the hype and shut down once the trend passes. By sticking to a stable development model, Fincor will build its financial ecosystem regardless of fluctuations of the public's interest towards blockchain. Such approach resembles development strategies of major tech companies (e.g. Amazon and eBay) which successfully survived the dot-com bubble challenge and flourished as multi-billion businesses afterwards.

We are eager to see you join our cause – to liberate the blockchain industry of its marginality and prove that blockchain-based businesses can evolve into major actors of the global economy.

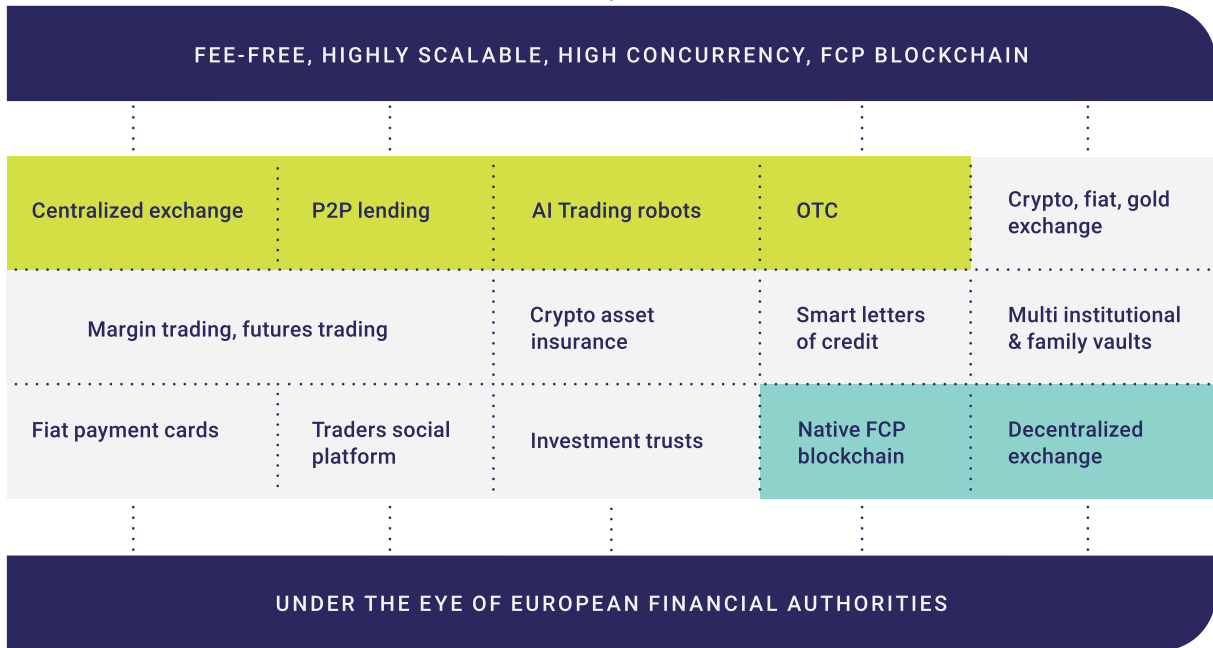
Our ultimate goal is clear – to develop Fincor as a single financial ecosystem, including:

- Smart AI-powered exchange with military-grade security (step 1)*
- Crypto-backed P2P lending platform (step 1)*
- OTC trading platform and services (step 1)
- Exceptional range of trading tools: crypto/crypto, crypto/fiat, crypto/gold exchange, margin trading, any crypto and any duration futures trading (step 2)*
- Investment trusts/funds (step 2)*
- Smart contract-based Letters of Credit (step 2)
- Multisig institutional and family vaults (step 2)
- Fiat payment cards and lightning fast European payments (SEPA) (step 2)
- Crypto asset insurance (step 2)
- Native blockchain with FCP consensus mechanism and sharding-technology (step 3)
- Fast, scalable, secure and cost-efficient environment for smart contract-based micropayments and third-party dApps (step 3)

Ultimately, all of the above will be powered by our own, enhanced Artificial Intelligence (AI) system, compliant with European anti-money laundering regulation and under the guidance of the European System of Central Banks (ESCB).

* these steps will be implemented after relevant regulatory approval. For more information please check our 7th section: [Legal Disclaimer](#)

Fincor Ecosystem



2.1. Smart Trading, Smart AML, Smart Security

INCREASING TRADING REVENUES WITH ARTIFICIAL INTELLIGENCE

<3 min reading

Not all systems labeled as Artificial Intelligence are actually smart. To be one, it needs ‘brains’ and ability to learn. That is what Fincor is aiming at – to develop an AI system tailored for the finance industry with artificial neural networks (ANN) and machine learning at its core.

Fincor AI will allow exchange clients to expand their crypto/gold/fiat trading options with automated or AI-assisted trading. Users will be able to set customized trading preferences used by our system as guidance while choosing the best possible trading strategy.

Most importantly, the system won’t just conduct pre-defined transactions as a typical trading bot would. It will also analyze the performance of other traders, as well as include external triggers, like breaking news, industry reports, and fluctuations on other exchanges, to preemptively buy/sell a specific currency or alarm our customers of potential risks and opportunities. All this data will also enable the system to provide recommendations on crypto trading with the highest potential.

Moreover, Fincor AI will be the foundation of our cybersecurity system which will guard our entire ecosystem. Our AI will help us in prompt incident detection, prioritize security tasks, deploy initial response actions, check for potential risks, whilst performing continuous system analysis for vulnerabilities, high-risk errors and other issues which require immediate attention.

Meantime, having invested in and already launched our own AI laboratory, we are delighted that the core of the AI-powered automated trading is already developed and successfully passed real-time

tests. For instance, during a trial with partial human supervision in May-June 2018, the AI system was actively trading on various crypto/USD pairs, gaining profits while the market was down.

In later development stages, the enhanced version of our AI system will conduct initial anti-money laundering (AML) and know your customer (KYC) procedures. Each year, companies spend millions of dollars on KYC procedures with an average case taking up to 26 days and these figures are expected to keep growing¹⁷. This is too long and too expensive for the fintech industry. Moreover, it also includes quite a few human-related risks which will be mitigated by an unbiased AI system. Fincor AI will also be able to recognize and analyze documents provided by applicants, as well as scrape additional information from both publicly available sources and closed databases. Pre-defined triggers, based on existing AML/KYC regulations of the European Union, including the 5th anti-money laundering Directive, will force the system to reject and blacklist potentially non-compliant applicants while reliable users will be verified within seconds.

Human intervention will be required only in special cases. However, thanks to machine learning, the ratio of false positive cases will drop with each case.

2.1.1 Fincor Tokens (FNR)

Our Fincor tokens (FNR) are structured as the utility/payment Tokens entitling holders of the FNR tokens to use the services and acquire products available at the Fincor ecosystem (as described in this White Paper) as well as to receive discounts for such services and products. The FNR tokens are not going grant any other rights, unless announced publically by the Fincor otherwise.

2.2. Safety First

OUR SECURITY SERVICE ADVISED US NOT TO SHARE THE SPECIFICS, AFTER ALL, SAFETY (SECURITY) FIRST

Over hundreds of years, the banking industry has managed to build an exceptional security reputation. Banks have learned that clients' trust in funds security is essential. Without this trust, it won't matter whether you offer excellent customer service or a wide range of financial services. People won't trust their money with you. Today security is taken as a *de facto* solution, which is never questioned by customers. When was the last time you inquired a bank on its physical and digital security procedures before opening an account?

Meantime, the crypto industry is in an entirely different situation. Many crypto exchanges have poor security standards and exchange hacks hit the global media headlines more often than ever. Truly secure crypto storage options, like custodian services, are available only to institutional clients while regular users are left exposed to the risks of many forms of cyber attacks. Many private individuals

~6 min reading

17 Thomson Reuters: <https://tmsnrt.rs/2ttqT4m>

hold their digital assets in their personal “cold wallets”, but keeping your assets in the “cold wallet” brings new challenges. Users have to continuously make transactions between exchanges and their “cold wallets”, incurring the network transaction and exchange withdrawal fees with every transaction. Essentially an added tax for your security.

With over 20 years of experience ensuring cybersecurity for telecommunication infrastructures within EU governmental and private organizations, our security team aims to create industry-best security solutions, which today could not be found even within the banking industry. To provide secure online crypto trading experience we tap into three most important security areas: a) Secure access and trading b) Funds storage and management c) Insider threats and work environment protection.

2.2.1 Fincor “Secure Access” technology – Secure Access and Trade

Our “Secure Access” technology allows everyone to enjoy military-grade security. For a reasonable monthly fee, all Fincor exchange and financial products’ users will be able to use this solution.

“Secure Access” is a hybrid (hardware+software) security solution consisting of three elements: i) USB key with encrypted Fincor software ii) unique three-layer connection encryption protocol iii) dedicated user profile providing direct access to the user environment stored directly on the Fincor server.

With “Secure Access” technology we’re eliminating the single biggest threat to your online security - the online environment itself. When browsing online, your safety is directly impacted by what internet connection you’re using (regardless whether you’re at home, work or some local coffee house), your browser and operating system, browser add-ons, computer and operating system, periphery devices connected to your network and the UI/backend connections implemented by the website owner (in our case, crypto exchanges).

With Fincor “Secure Access,” you get the highest-grade security anywhere you go. Our system is built for you to access crypto trading even whilst using the most infected Windows XP computer in some random public internet café and connecting to an unsecure Wi-Fi network.

This is how it works. Fincor customers can download our encrypted security software directly to their USB key from our website. We always recommend to use a new USB key which hasn’t been used before. Once the software is downloaded and installed, use this key to connect to Fincor from any computer. Once the USB is connected, the USB content automatically loads and decrypts on the computer’s Random Access Memory (RAM). So far, no one has successfully hacked information stored on RAM, but we invite you to try that. Once the correct system logins are provided, our customer have access to the dedicated environment, directly on the Fincor server. The server connection is secured with a 3-layer connection encryption protocol.

Thus, users get the experience as if trading in our data center and being directly connected to a particular server rack. No computer (except for RAM) and no browser is needed. So, no way to hack.

2.2.2 2FA and connectivity encryption

Good security starts with the basics. Surprisingly, to this day mandatory 2FA login is only implemented by a few crypto exchanges. This, however, is the essential first step and could have prevented most of the recent crypto exchange hacks. Fincor users will be able to set up 2FA approvals for all critical actions on the Fincor exchange and financial services platform: login (mandatory), order submission (optional) and currency withdrawal (optional).

For those customers who won't be using our secure access technology, additional measures will be taken to prevent the MITM (man-in-the-middle) attacks. One of the measures is the TLS1.2 cryptographic protocol which raises the security of the communication between Fincor UI and the backend.

2.2.3 Funds storage and management

The largest crypto hacks were made possible by exchanges storing assets in their "hot wallets" - wallets, connected to the Internet. This is not the case with Fincor. In any given time no more than 2% of the funds will be stored in "hot wallets". The remaining 98% of the funds will be stored in offline vaults, also referred to as cold storage or wallets. Our innovative Micro Wallet Structure solution will enable us to effectively manage online wallets by splitting the assets among them while keeping the capital available in each wallet under the predetermined threshold, therefore effectively limiting the value of each hot wallet. Online wallets will only be funded following offline procedures with an internal semi-automated consensus mechanism ensuring that this process is not subject to insider threats or manipulation.

2.2.4 Insider threats prevention and work environment protection

Insider threats prevention. Even if end-user security risks are managed thoroughly, there are still significant risks related to the operational staff, who are responsible for the funds' management (wallets structuring and funding) and internal exchange procedures. Threats don't necessarily mean that there are any actors with poor intentions within the organization. In most exchanges, the staff is under a constant threat of phishing attacks during which hackers, through social engineering, gain access to the staff members' credentials and subsequently can initiate various internal operations. For this reason, we'll have a highly segregated logs structure combined with a tightly controlled access structure. In simple terms, logs structure allows us to keep the customer activity data in separate databases. Doing so, it won't be possible to alter the history or make any adjustments that might lead to the funds' loss due to the changed accounting history or falsely initiated withdrawals. At the same time, the controlled access structure for each employee will provide rights only to the essential information needed to perform their responsibilities.

Workenvironment protection. Have you ever heard of the casino being hacked using Internet-Connected Fish Tank? Read this*. It's a highly entertaining, if not worrying, case demonstrating the necessity to go the extra mile ensuring your company is not at risk to hacks through any Internet-

* <https://thehackernews.com/2018/04/iot-hacking-thermometer.html>

connected devices, which are not essential for employees to perform their responsibilities. Routine security audits will be used to eliminate all the security risks in the security flaws of the periphery IoT devices. Be it a Bluetooth keyboard or a smart thermostat.

Security summary

We pledge to dedicate up to 10% of the overall budget for building, maintaining and continuously improving our cyber-security system. The alpha version of our exchange already meets the industry's best practice under ISO/IEC 27001:2013 and CryptoCurrency Security Standard (CCSS) 3 standards. The core of Fincor ecosystem's security will be our robust AI. The system will be monitoring all Fincor services 24/7 for any high-risk and suspicious activities, instantly detect and inform our cybersecurity team of any incidents, as well as conduct initial incident analysis, contamination and rectification tasks.

2.3. Smart Exchange

~6 min reading

The first step of our plan is to build the foundation of our financial ecosystem - a smart crypto exchange. Besides faith, we also have skin the game. Our personal capital investments already reach more than half a million dollars, and with a 10 people development team, we've introduced the alpha version which you can check [here](#)*.

It features a unique, intuitive user interface with *lite* features for quick and easy cryptocurrency purchases by novice customers as well as advanced features, tailored for crypto professionals. Our exchange is accessible on both mobile and desktop environments. While designing Fincor user experience, we spent countless hours streamlining our exchange to the most convenient environment to trade, where every function you need is at your fingertips and only one click away.

From day one, all Fincor customers can trade four pairs of the most popular cryptocurrencies: XRP/BTC (Ripple/Bitcoin), LTC/BTC (Litecoin/Bitcoin), ETH/BTC (Ethereum/Bitcoin), BCH/BTC (Bitcoin Cash/Bitcoin).

Security is essential for us. Therefore we've launched the alpha version with most of the planned security measures already deployed. Fincor customers can confirm identities using our KYC process both on mobile and desktop devices, set 2FA security for logging/trading/withdrawals, use our secure trading environment via our native 'Secure Access' technology**. More about exchange-specific security measures can be found at the end of this chapter.

Launching the exchange first, allows us to start generating revenue early, while the generated user base will be used to cross-sell our additional financial services like P2P crypto lending.

* <https://fincor.io>

** For now, this feature is optional and accessible upon the individual request.

*** <http://fincor.io/security>

Fincor smart exchange will deliver industry-leading transactions speed, lower commissions, fiat payment methods, funds insurance and exceptional user experience. Moreover, our team of cybersecurity experts will provide military-grade security to everyone. You can check our security offerings [here](#)***.

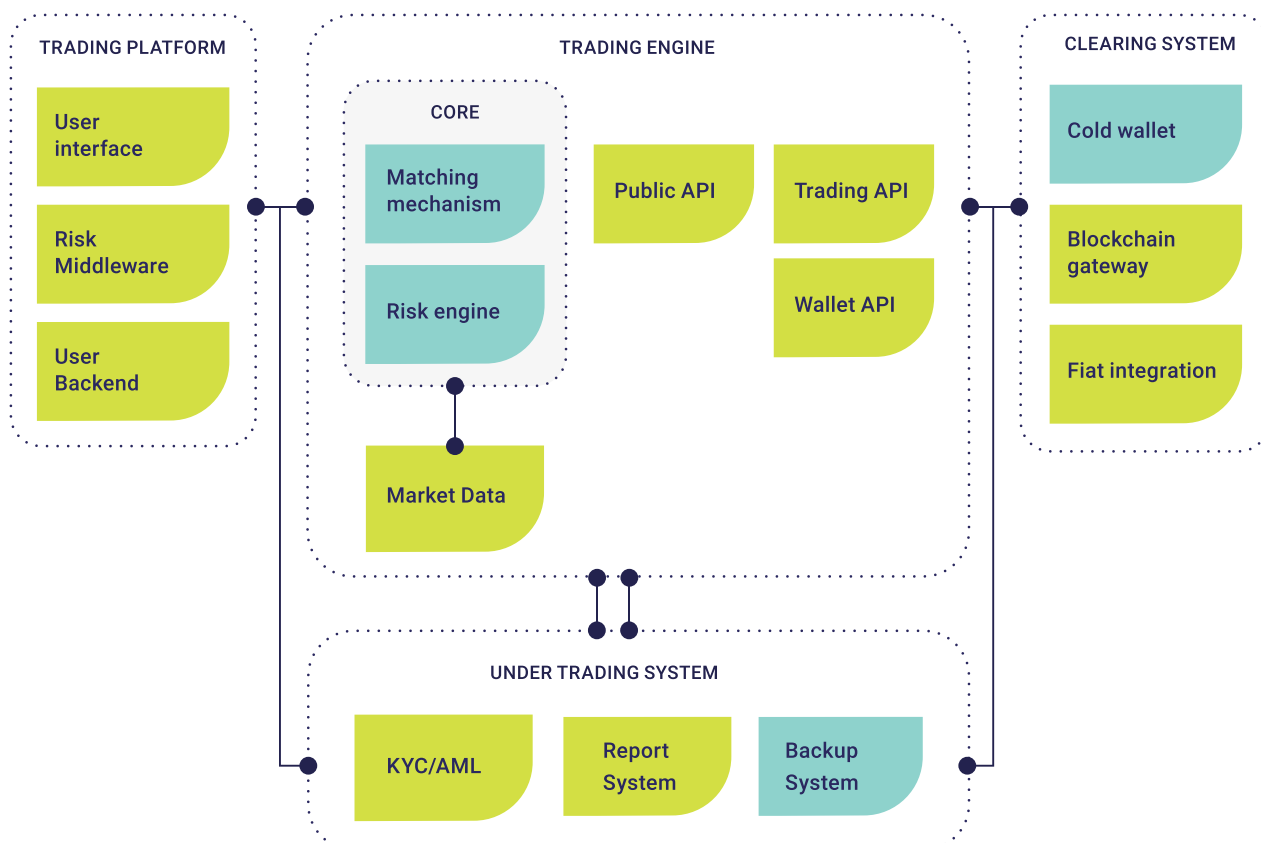
Fincor exchange is being built for performance from the ground up. Our matching engine will be able to handle 10m transactions per second and therefore support liquidity for any crypto asset traded on Fincor exchange under any market conditions.

Exchange server will support real-time trading and user/market data transmission through the WebSocket protocol. This will help ensure the immediate exchange side response. This will be implemented via a separate Network server based on Network library.

Our event-based and high-performance network programming library includes TCP/UDP/UNIX SOCKET server and client implementation, a simple timer, state machine, thread pool and use of asynchronous I/O.

This library is optimized and could work with main speed limits:

- Limits on open filehandles
- Limits on threads



Additionally, we use features like:

- *Zero-Copy* implementation which minimizes the number of copies of data to the bare physical minimum therefore allowing faster data transmission
- *writenv (or TCP_CORK)* which informs the kernel to avoid sending partial frames and therefore avoid small frames and significantly increase the data transmission speed.

We are already working on integrating the SEPA payments infrastructure, which will enable us to provide safe and fast EUR deposit and withdrawal options for all of our clients.

We will go above and beyond in using the most advanced security measures, but as time has shown over and over again, only the paranoid survive. Therefore, all funds stored on Fincor's online wallets (hot storage) will be additionally insured making sure that no threats, even theoretical ones, can harm our operations integrity.

Our vision is to rival the largest market players with superior safety and best user experience. Make no mistake, our cryptocurrency pair offering will be hard to beat. Ultimately we want to be a one-stop-shop solutions provider for crypto traders. Further on, coins launched on our native blockchain will have an exceptionally short enlisting process.

In addition, our users will be assisted by smart trading bots, developed by our AI laboratory.

We also included a solution for the cost efficient execution of large deals for major traders and post-ICO projects. Usually deals with larger amounts of cryptocurrency are split and executed as a set of smaller trades. Apart from the inconvenience of executing multiple deals instead of one, there are also exchange rate fluctuations - the price for the first small deal may significantly differ from the price for the final small deal. With this in mind, we decided to introduce an Over-the-Counter service (OTC). The service will allow larger traders, both individual and institutional, to buy or sell mid-to-large amounts of crypto assets in a single deal with a fixed, pre-agreed price while maintaining maximum privacy (without compromising on AML/KYC). With transactions not recorded in the exchange's order book, OTC deals will also provide trading parties with higher privacy.

Addressing security challenges of our smart exchange, we will allocate 10% of our budget to building, maintaining and developing our security system, under guidance of experienced cybersecurity professionals. With our security offerings, we're pushing to the next frontier by providing military-grade security measures to everyone. Check our dedicated security offerings page [here](#)* and experience it yourself.

Our team members have extensive experience working for the world's most acclaimed tech agencies and companies. In anticipation of regulations and stiff competition for the new customers entering the crypto space, we will leverage our tech and business development experience to attract new users. With market-leading user acquisition strategies we aim to have a consistent competitive advantage in acquiring and retaining our customers.

We understand that no matter how advanced or secure Fincor Smart exchange is, there will still be a segment of people who will prefer trading on decentralized crypto exchanges. The principle of decentralization motivates most of these people since the users hold their private keys.

* <https://fincor.io/security>

A decentralized exchange allows users to manage and store cryptocurrency on their own devices (“Cold storage”) thus providing an even higher level of asset security against cyber attacks. Going the extra mile for our users, we also decided to launch a decentralized version of our Smart exchange which will act as an online platform through which currency and asset traders will follow exchange rates, communicate with each other and conduct secure peer-to-peer transactions via open-source smart contracts.

More importantly, since our DEX will be based on our own FCP blockchain platform, there will be no mining fees providing our customers with the significantly lower cost of trading. The same goes for third-party token listing which will be much cheaper and almost instant if compared with existing centralized exchanges. All of this will reduce crypto asset theft risks related to system-wide attacks, lower load on servers, eliminate trust issues as all transactions will be conducted via escrow-like smart contracts.

In addition, Fincor will become a platform of choice for a wide range of dApp developers. FINCOR will provide them with an option to be listed on our DEX with no need for lengthy queues, unjustified, sky-high fees or complicated community voting processes. All dApp projects built on Fincor blockchain will have direct access to Fincor DEX, meaning they will have instant opportunity to exchange tokens into fiat thus fueling their further development. Non-FINCOR blockchain dApps will also have the opportunity to be listed on Fincor DEX, but the process would require an atomic swap between their initial blockchain’s token to Fincor token thus prolonging the listing process.

Thanks to smart contracts and our own highly scalable, high concurrency blockchain, transactions will be placed, matched and executed almost instantly, based on real-time FINCOR DEX rates.

In further development stages, the exchange will also become a launch pad for third-party tokens. In addition, the ecosystem will support languages of all major markets across the world.

2.3.1 Additional comments on exchange security implementation and management (as much as we can disclose)

System security. The security of the system is divided into 2 levels - basic and architectural. Architectural security refers to hardware deployment, the structure of a database and the construction of permissions and rights system. Basic security: code style, the system of users validation and levels of access to their account.

Basic security system. Clean code - code should be executed without errors in the bug console and without any warnings. This allows reducing the number of possible vulnerability “embeddings”.

Validation security. Main user authentication and validation will be made by three key touchpoints:

- a password checkup;
- A password validation by email;
- 2FA validation.

Domain Security. Registration blocking is a special restriction that prohibits anyone from making changes to your domain without personal communication with the registrar manager:

- Registrar blocking - prevents domain hijacking by requiring additional data (documents) to change information in the global domain registry;
- Role Accounts - this is the solution to avoid leaks of private information. Non-personal accounts are used to protect individuals or organizations from targeting intruders;
- Expiration of access - maximum six months expiration window for administrators and managers credentials;
- DNSSEC - eliminates the threat of DNS cache poisoning by authenticating all DNS queries by cryptographic signatures. Instead of blindly caching records DNS servers rejecting unauthenticated responses.

Web-security

- Strict-Transport-Security header (HTTP-Strict-Transport-Security (HSTS) header forces browsers to open website in HTTPS);
- X-XSS-Protection header (X-XSS-Protection defines how browsers should enforce cross-site scripting protection);
- Content Security Policy header (Content-Security-Policy (CSP) enables the definition of permitted sources for each type of content, helping to defend against XSS attacks. It also enables the ability to define several browser behaviors, such as sandbox enforcement, to the value to be sent in the HTTP Referer header);
- X-frame-options header (X-frame-options header specifies whether the website should allow itself to be framed, and from which origin. Blocking framing helps defend against attacks such as clickjacking);
- X-content-type-options header (x-content-type-options can direct browsers to disable the ability to sniff page content type and only use content type defined in the directive itself. This provides protection against XSS or drive-by-download attacks).

General security

- Compliance with requirements (CR)—checks for outdated SSL/TLS algorithms in server settings. Outdated algorithms allow hackers to decrypt user traffic and gain access to logins/passwords;
- SPF domain records (SPF)—verify the letter sender and protects from forgery (email spoofing);
- Web application firewall (WAF)—protects exchanges from various attacks: SQLi, RCE etc.

Architectural security system

The architectural security system is a system of interaction between functional elements:

- **BACKUP SYSTEM AND DUPLICATION SERVICES:**
To block and roll back a broken state, an automatic backup system operates with data, which does not affect personal information and registration parameters. System also has

the integrated load balancer node between exchange gateways, which is also responsible for authorization within the system.

- **DISTRIBUTION SERVICE SYSTEM:**

Based on this architecture, each services element (trading engine, under trading system, clearing system, trading platform) is independent - this means that the system is built on a microservice architecture, and the services themselves interact, through internal closed APIs.

- **CRYPTO-WALLETS SECURITY SYSTEM:**

The system of distribution and interaction between the current “hot” wallets for deposits and withdrawals and “cold” wallets for storing the main amounts of cryptocurrencies. Cold wallets are disconnected from the Internet and use a separate, direct and closed channel that is connected to a dedicated server for “cold” wallets.

- **INTERNAL RULES SYSTEM**

This system of rights and rules for interaction between management and the development team of the exchange, which includes a system of rules for maintaining code and rules for conducting corporate communication and documentation.

The system of roles for managers and a secure system of accounts, which corresponds to the level of security accounts exchanges.

2.4. Crypto, fiat, gold, margin, futures trading

IMPRESSIVE TRADING RANGE, LIKE NO OTHER

Most cryptocurrency exchanges offer crypto-to-crypto trading options only as they tend not to invest in new services, don't have the experience of launching complex financial products or, simply, do not wish to deal with multinational tax regulations.

The Fincor team, however, will leverage its outstanding experience in building investment tools for traditional banking, to develop investment instruments that meet the real needs of institutional and retail investors.

This is why our exchange users will be able to trade not only crypto/crypto but crypto/fiat and crypto/gold pairs as well.

Following all required regulatory approvals, Fincor will also introduce margin trading and futures trading.

By presenting a wide range of trading options, we will provide investors not only with an opportunity of higher returns, but also help them with investment diversification thus reducing their risk profile.

<1 min reading

Exchange comparison (2018 3Q)

	FINCOR	Binance	Bittrex	Bitfinex	Bitmex	GDAX	Kraken	Spectrocoin- broker only	Okex	Huobi	Livecoin	Poloniex
Fiat gateway	✓	✗	✓	✗	✗	✓	✓	NA	✓	✗	✓	✗
AI	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Margin trading	✓	✗	✓	✗	✗	✗	✓	✗	✓	✓	✗	●
Futures trading	✓	✗	✗	✗	✓	✗	✗	✗	✓	✗	✗	✗
Vault	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
Institutional vault	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
Trading fees	0,045	0,05	0,25	0,20-0,00	separate fees	0,30-0	0,26-0,00	High, lots of fees	0,20-0,02	0,2, discounts up to 50%	0,18-0,02	0,20-0,00
Volume	NA	777 411 000	38 700 000	325 000 000	1'482'000'000 *	102 600 000	107 000 000	NA	975 000 000	504 000 000	25 700 000	23 500 000
Other payment	cards	✗	Bank transfer	Ridiculous - asks 10000 USD in order to start trading	✗	Bank transfer	Bank transfer	plenty methods and cards	Bank transfer, Alipay, Wechat pay	✗	Visa/MC, Payeer, Perfect Money, Capitalist, AdvCash, Qiwi.	✗
OTC	✓	✗	✗	✓	✗	under development	✗	✗	✗	✓	✗	✗
Insured funds	✓	✗	✗	✗	Aggregate insurance for futures	FDIC insurance up to 250 000 USD	✗	✗	✗	✗	✗	✗
iOS App	✓	✓	✗	✓	✗	for coinbase	✗	wallet app	✓	✓	✗	✗
Android App	✓	✓	✗	✓	✗	for coinbase	✗	wallet app	✓	✓	✗	✗
Online support	✓	✓	✗	✗	✗	yes, but not instant	✗	✓	✓	✓	✗	✗
Social platform	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Engine	10 000 000	1 400 000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Latency (s)	0,0000001	0,214	0,016	0,045	NA	0,03	0,036	NA	NA	NA	0,097	0,036
quality(our own)	Superb	Very good	Bad, lot of customer complaints	Good	Above average	Below average, lots of customer complaints	Average	mixed customer reviews	Very slow, angry customers	Good	Good	Below average
Was it hacked?	✗	NO	NO	hacked in 2016	NO	NO	NO	NO	hacked in 2016	NO	NO	hacked in 2014

2.5. Crypto backed P2P lending

CREDIT RATINGS AND BACKGROUND CHECKS BY THE AI SYSTEM

<2 min reading

In order to further expand our financial services portfolio, Fincor will introduce a peer-to-peer cryptocurrency-backed lending platform. The platform will become an integral part of the rocketing global P2P lending market which is expected to grow from \$26b in 2015 to almost \$900b by 2024.¹⁸

With tokens and coins as collateral, users will be able to apply for fiat currency loans. The system will conduct a background check of the applicant, including credit history available in national credit bureaus and history of cryptocurrency transactions, and will calculate the applicant's overall credit rating. This will provide potential lenders with a stronger understanding of the borrower's ability to fulfill financial obligations.

The lending process itself will be executed in the following way:

1. The borrower files a request for a loan
2. The lender reviews the loan request and, if interested, accepts the terms
3. If parties reach an agreement, the system generates a smart contract with the loan amount, collateral amount, interest rates, payback time, and other conditions
4. The borrower passes the required number of tokens or coins as collateral to the system which includes it in the smart contract
5. The system executes the smart contract by transferring the lender's funds to the borrower
6. The borrower repays the loan according to the terms
7. If the borrower fails to fulfill one's obligations, the system transfers the collateral to the lender

A multi-loan has the same process of granting a loan with the difference that there are several lenders instead of one. It allows the borrower to receive a larger loan, while the lenders share both credit returns and the collateral (in case of the borrower's default).

In future development steps, we will expand our lending products to fiat and other lending options.

18 <https://www.prnewswire.com/news-releases/peer-to-peer-lending-market-to-be-worth-us-897-85-billion-by-2024-tmr-883066968.html>

2.6. Investment Trusts, Institutional Investment Tools And Vaults

GOLD, VAULTS, DEDICATED SUPPORT, FOR STARTERS

Trading has become the cornerstone of the ever-growing global cryptocurrency community. A growing number of individual and institutional investors are joining crypto markets. For instance, venture firms and hedge funds from around the world invested over \$637m into blockchain projects in 1Q 2018 alone (with only \$496m throughout the entire 2017)¹⁹.

However, many individual investors have limited financial resources while larger investors lack a deeper understanding of how the market is developing, what are the risks and opportunities.

By continuously developing our extensive network of corporate clients and partners for over 20 years now, we understand the needs and expectations of institutional investors.

With this in mind, following relevant regulatory approvals, we intend to launch Fincor crypto investment trusts/funds which will accumulate resources of multiple investors and invest them into:

- single and multiple cryptocurrencies;
- micro-, mid- and large-capitalization cryptocurrencies;
- different categories of cryptocurrencies and crypto tokens.

Our investment trusts/funds will benefit from opportunities of our AI system, including continuous market analysis, trend monitoring, currency rate forecasting, and automated trading. This will allow our investors to earn higher returns with less risk.

Institutional investors are increasingly exploring opportunities in the cryptocurrency market. However, due to poor AML/KYC control, limited technical functionality (speed), hedge opportunities and the lack of custodial solutions, using the existing exchanges would generate more risks than profits.

Following all required approvals, unlike other crypto trading platforms, Fincor will offer an extended range of investment tools, including margin and futures trading, as well as gold. Yes, gold. It remains as the most popular precious metal to invest in²⁰, and we cannot deprive our clients of the perfect opportunity to diversify their portfolios. With further tokenization of real-world assets, we plan to extend crypto/asset trading options for Fincor clients evolving to a crypto asset exchange (e.g., CryptoKitties - it showed how the game evolved to entirely new category of crypto asset. There are tremendous opportunities in crypto assets space, and we see it growing beyond virtual assets to real asset tokenization).

Corporate clients will be provided with institutional vaults: an investor's single account with several users who will have their own levels of permissions and transaction limits. Vaults will support multisignature (multisig) for transactions above a set limit thus ensuring that multiple parties within an organization will have control over the trading of its crypto assets. Similar functionality will also be offered for private users as a Family Vault.

¹⁹ Crypto Fund Research: <https://bit.ly/2KQpe4l>

²⁰ Forbes: <https://bit.ly/2KcR62c>

INSTITUTIONAL / FAMILY VAULT						
USERS	Admin	Withdrawal or transfer approval	Withdrawal or transfer CO-approval	Over-limit transaction approval	Over-limit transaction co-approval	TRANSACTION LIMIT
CFO	✓	✓	✓	✓	✓	300 BTC 5400 ETH
Department Head	✗	✗	✓	✓	✓	100 BTC 1800 ETH
Division Head	✗	✗	✓	✗	✓	50 BTC 900 ETH
Trader 1	✗	✗	✓	✗	✓	10 BTC 180 ETH
Trader 2	✗	✗	✓	✗	✓	5 BTC 90 ETH
Trader 3	✗	✗	✓	✗	✓	25 BTC 450 ETH

For corporate clients, we will also implement a funds segregation option. Moreover, we will provide the possibility of withdrawal or transfer of assets to be subject to a 24-to-48 hours delay to provide even higher security level against fraudulent actions. All of our corporate clients will have dedicated account managers that will help with client onboarding, provide continuous service support as well as drive client adoption of the financial services within Fincor portfolio.

2.7. Smart Letters Of Credit

REENGINEERING LETTERS OF CREDIT FOR THE SAKE OF THE GLOBAL TRADING

<2 min reading

Up to six months for the buyer to receive the payment and up to 15% fees for the seller to get his bank's support – that is too long and too expensive to conduct international trade in the 21st century.

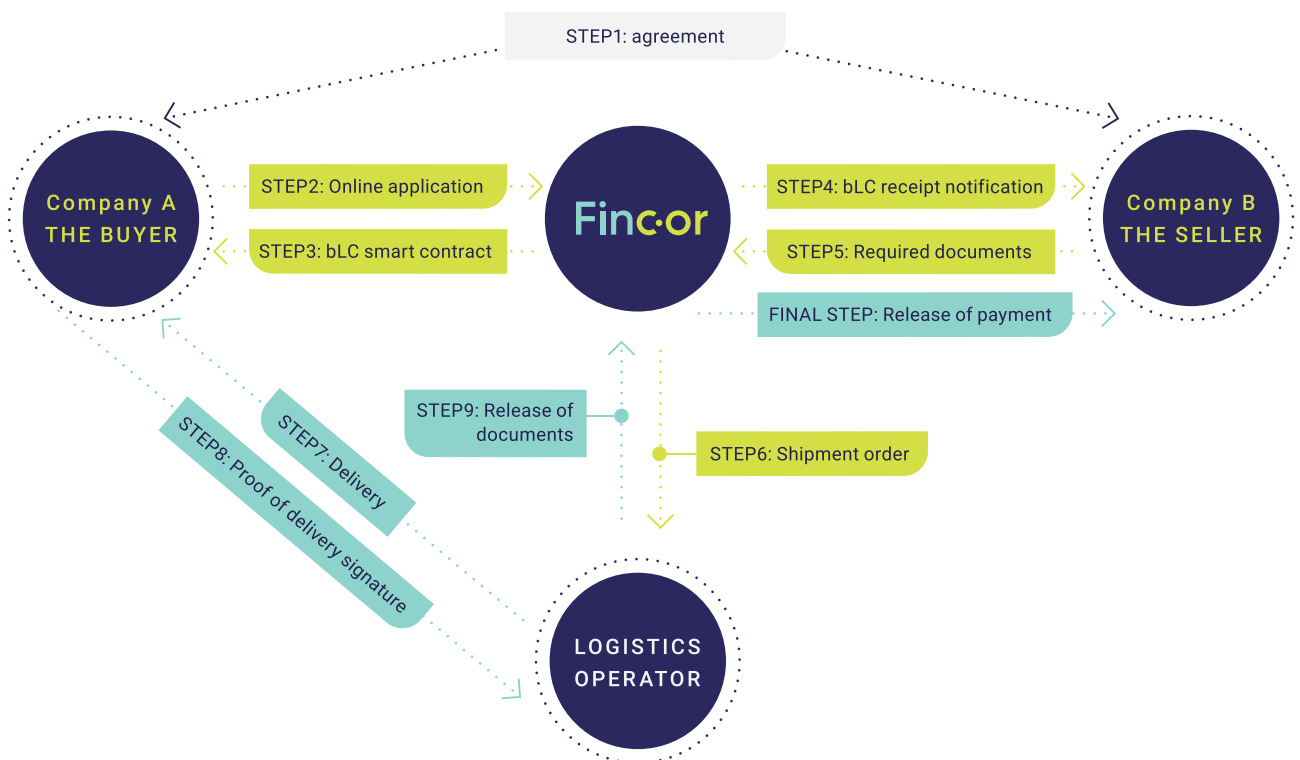
Luckily, with Fincor parties will have a new alternative – smart contract-based Letters of Credit (smart L/C), executed by smart contracts.

Here is how it will work:

1. After parties reach an agreement, the buyer applies for smart L/Cs online via the Fincor platform. He provides essential contract information, as well as a copy of the contract itself
2. Fincor AI conducts the verification process of provided documents, checks external credit rating databases and the buyer's account whether his funds meet his contract obligations. If some of the conditions are not met, the system rejects the application. Otherwise, the confirmation is issued in near real-time.

3. The system transfers required funds from the buyer's IBAN account to a separate account, generates a smart contract and sends it to both parties.
4. The seller verifies that all smart contract conditions are met per the original agreement. If the seller rejects the smart contract or overdues with an action, the smart contract becomes invalid and the system automatically returns funds to the buyer.
5. If the smart contract is approved, the seller uploads additional documents, if required, and the system starts the execution of the contract. It notifies the third party – the logistics operator of the shipment details (cargo details, time and place of cargo pickup, the point of destination, other).
6. Once the cargo is delivered to the buyer and the buyer signs the proof of delivery documents, the system automatically releases both shipment documents to the buyer and the payment to the seller.
7. The entire information will be visible and accessible on the blockchain and involved parties will be able to check where the goods and money are, at any given time.

All non-logistic steps take up to several minutes to process with only the costs of execution on the blockchain.



2.8. Worldwide Payment Cards & Mobile Payments

FORGET MULTIPLE INTERMEDIARIES AND THEIR FEES, WITH FINCOR - EVERYTHING IS UNDER ONE ROOF

<2 min reading

Blockchain technology awarded us the possibility to significantly simplify and speed up certain financial operations while preserving the high security of assets. However, to reap the benefits, merely trading different tokens and cryptocurrencies is not sufficient. Nor is enough to exchange digital assets into fiat money, since users need to use third-party crypto/fiat exchanges and transfer fiat funds to IBAN accounts (most probably, to a bank). This means not only inconvenience for users, but also a substantial amount of exchange, withdrawal, and fund transfer fees.

People need the freedom to use their money wherever and whenever they wish to. That is why, Fincor, as a whole ecosystem, will offer not only crypto trading and crypto/fiat exchange but also IBAN accounts with payment cards for payments in real life. Entire asset flow process under one system – with no inter-Fincor transfer fees and near instant transactions.

In other words, our own payment cards, or those issued in partnership with one of the global providers of electronic funds transfers, will enable users of the Fincor ecosystem to connect their fiat money accounts with payment cards to pay for goods and services in both physical and digital worlds. Fincor payment cards will be based on international EMV (Europay + MasterCard + VISA) standard.

In addition to that, our clients will have the option to link fiat IBAN accounts to our exchange with mobile apps for contactless payments based on Near-Field Communication (NFC) protocols.

This is particularly convenient for clients in markets like India where, almost 80m mobile payment clients are expected, this year alone²¹. Thanks to the rocketing growth in both mobile phone ownership and mobile Internet penetration²², Fincor clients will be able to receive inter-system payments from any world location for free, as well as use funds both online and offline.

2.9. Fincor Blockchain

FIRST BLOCKCHAIN PLATFORMS DID THEIR JOB, NOW IT'S TIME FOR THE NEXT-GEN BLOCKCHAIN

<3 min reading

The first major blockchains, including Bitcoin and Ethereum, have done their job – they proved that almost any business or industry can benefit from the blockchain technology by decentralizing and automating various business and even government-level processes. By recognizing more blockchain use cases beyond the initial applications, such as a means of money transfer (cryptocurrencies) or asset ownership and funding (ICOs/STOs), pressure built on protocol developers to find new

21 Tech in Asia: <https://bit.ly/2D6sk05>

22 Pew Research Center: <https://pewrsr.ch/1RX3lqq>

solutions to the high costs and scalability limits of the initial blockchains. Our solution is to develop our native blockchain with our custom FCP (Fincor Consensus Protocol) consensus protocol.

The third step in the Fincor expansion plan is the development of our native blockchain with our custom Fincor Consensus Protocol (FCP).

After carefully analyzing many blockchain protocols, we've recognized the need to create our native blockchain. The main reason is that many currently deployed protocols have severe speed limitations and high costs that pose significant scalability issues when aiming to apply these technologies in financial systems or industries that have high throughput requirements. Also, a usually politicized and dubious process of how the updates are agreed on, planned and implemented – it doesn't encourage that the progress will happen at a required or expected pace.

That's why, instead of using existing platforms with their speed, scalability and cost of transaction execution flaws, we decided to create blockchain with our native consensus protocol – FCP (Fincor Consensus Protocol) – which will be a construction of the Federated Byzantine Agreement, supplemented by sharding technology. Below we describe key benefits and technological implementation decisions, with a more detailed description and analysis available in our Blockchain Research Paper.

Benefits of FCP, based on the Federated Byzantine Agreement, supplemented by sharding technology:

- our blockchain will be liberated from speed caps allowing us to greatly increase transaction velocity to approximately 10,000 transactions per second with the first protocol deployment. After integrating dynamic sharding technology, the speed will further increase and will exceed that of global payment systems;
- the competition between miners is no longer required thus significantly reducing the cost of running the network;
- it will also allow us to implement nearly costless transactions within the ecosystem and provide much more favorable conditions for third-party decentralized applications (dApps) developers and Internet of things (IoT) applications;
- our FCP-based blockchain will provide optimal security by protecting the blockchain from fraudulent participants thus minimizing cyber attack risks, which are typical for PoW blockchain platforms;
- and finally, in order to enjoy Fincor blockchain's benefits – near costless transactions, exceptionally fast payments, sophisticated smart contracts – users don't need to be developers. Anyone will be able to create and execute smart contracts via user interfaces and apps provided natively by Fincor or by the third-party developers. For blockchain to be adopted by every business – from mom-and-pop stores to global corporations – ease of use is the absolute necessity.

2.9.1. Essential elements of the Fincor FCP technology

Federated Byzantine Agreement & FCP

The Federated Byzantine Agreement allows distributed systems to reach a consensus on efficiency, standard cryptographic security and flexibility while designating trusted participants. The Federated Byzantine Agreement (FBA), on which our platform will be based, allows us to achieve decentralized consensus, with all traditional advantages of the Byzantine Agreement, while forming quorums from individual participants' trust groups.

To construct the FBA consensus mechanism, we will implement the Fincor Consensus Protocol (FCP) which will ensure optimal security by protecting the blockchain from fraudulent participants. Unlike other protocols (PoW/PoS), FCP doesn't require substantial computing resources: This, together with the open network membership provides the basis for organic network growth.

Sharding

Most existing blockchain protocols have an essential flaw – scalability limitations. None of the current platforms provide a real alternative to the current global payment networks. Just compare several to a couple of dozens of transactions per second, in some blockchains, to thousands of transactions per second within global payment systems.

To enable higher throughput, data on Fincor blockchain will be divided into shards. Sharding network implies that every transaction within the blockchain is processed by a shard which, in turn, is randomly chosen (i.e. validated) by a set of randomly selected validators (where in a traditional blockchains transactions are sent for validations to all nodes). This process significantly lowers the load on the entire network thus increasing the scalability of the network and the speed of transaction validations without compromising security.

Additional comments on some important sharding technical elements:

For a node to bind with a shard and thus participate in the basic consensus protocol, $\frac{2}{3}$ (66.7%) of validators must vote for the node. Validators are nodes chosen by a non-profit organization which manages the blockchain and makes vote-based decisions on each node-to-shard allocation.

Based on pseudo-random voting results, the shard generation protocol shifts from one shard to another after the end of time which is allocated for voting on each shard (the content of each shard remains unknown). In the very beginning, the process genesis creates the first cycle (a period of time) – the time between the first and the second shards are validated (the time of start of this first cycle is unknown to users). Afterward, the first time interval is modified in a pseudo-random manner, and further choice and allocation of nodes to shards is conducted based on the first time interval. Finally, validators vote on chosen nodes.

Collectively, validators will be making as many decisions as necessary to ensure the successful operation of the entire network, while distributing the network's shards, each of which has n_0 -nodes required to reach consensus.

Sharding uses a deterministic function to assign a sufficient number of nodes to a shard. For example, each shard has a set of n_0 -nodes. Nonce values are sorted in ascending order, and first nodes are assigned to the first shard. The following set of n_0 -nodes is assigned to the next shard, and so on. The position of nodes in the voting list does not change, only the time interval between the votes and the choice of shards changes.

Distribution of transactions between shards: any transaction (e.g. from account A_n ---> account B) is processed by one shard[c]. Assuming, there are shards numbered from 0 to $l-1$, the transaction is assigned to the shard which is identified by $\lfloor \log_2 l \rfloor + 1$ rightmost bits of the sender's address (i.e., the address of the account A_n). Since the account address is a 160-bit numerical value (integer), l is limited as $\lfloor \log_2 l \rfloor + 1 \leq 160$.

As a result, for each address we output a normalized A_{normal} :

$$A_{\text{normal}} = \text{LSB}_{160} (\text{SHA3-256} (\text{PubKey}(\text{sk})))$$

After the designated shard is identified, the transaction is broadcasted further. As soon as the transaction reaches the validators of the selected shard, they include the transaction in the general ledger (blockchain).

Consensus

To update such distributed states as a registry of transactions or a hash tree of certificates the Federated Byzantine Agreement (FBA) is used. Nodes avoid conflicting states by agreeing on what updates are recognized as valid. The FBA consensus defines each update based on a unique time interval – an interval which allows to link dependencies between updates. For example, slots can be sequentially numbered by positions in the registry (blockchain).

The FBA consensus protocol system launches a consensus protocol that ensures that nodes match the slots. For example, a node v can safely apply an update x in a slot i if the update can be safely applied in all slots on which the slot i depends. Moreover, the protocol presumes that all properly functioning nodes will eventually agree on the update x for the slot i . At this stage, v has the statement that the transaction x is valid for the slot i .

Quorum slices

In the FBA consensus protocol, nodes exchange messages which confirm the status of slots (transaction history, a copy of the registry). The system assumes that such statements cannot be forged – an assumption which can be guaranteed by the fact that the nodes are named the same as public keys, and they sign transactions with a digital signature. When a node receives information

that a sufficient (necessary) set of nodes confirms the state of the slot, it means that neither this node nor any other functioning node will ever contradict this confirmation. Such sufficient set is called “quorum slice”, or simply “slice”. In the case of a node failure, the node can use one of several “slices”, any of which will be sufficient to confirm its status (slot state). Globally, the FBA protocol system consists of a free confederation of nodes, each of which has one or more “slices”.

Scalability and instant transaction confirmation

Based on the solutions mentioned above, with the first deployment of Fincor blockchain, we plan to achieve approx. 10.000 transactions per second. After integrating dynamic sharding technology, we anticipate to expand the blockchain scalability further – it will at least be equivalent to that of the world’s leading payment systems.

Unlike most existing blockchain platforms, Fincor blockchain will provide its users with near-instant transaction validations. The confirmation process will take as little as 3 to 5 seconds.

Lightning Network

Our blockchain will use a decentralized payment network known as the Lightning Network. Already successfully tested on Bitcoin, the network allows conducting micropayments and cross-platform atomic swaps via multi-level contracts and smart contracts. Significant advantages of the protocol include low fees and low load on the network.

Fincor will also support multi-signatures as a guarantee of reliability thus eliminating the need for users to wait while the network searches for blocks.

Next generation smart contracts

Smart contracts are one of the most promising areas for the blockchain industry. Smart contracts allow parties to conduct deals without any trust issues and lengthy paperwork. They allow introducing a new level of transparency and security against document frauds. However, the complexity of creating and high costs of executing smart contracts discourages a broader adoption of this solution.

Fincor will solve these issues once and for all. We will offer a unique, user-friendly functionality which will empower any user to easily create smart contracts based on various templates. This will allow both individuals and businesses to benefit from the smart contract technology with no need for programming skills or extra staff.

Decentralized Distributed Database

The Fincor platform will be a decentralized network which consists of independently operating peers. Such an approach will allow the Fincor network to avoid dependence on other objects since its successful operation will be based on multiple independent participants – servers, the number of which will be continuously increased. Therefore, the network will operate without disruption, even if some servers face malfunction.

1% fixed annual inflation

Fincor distributed network will have an embedded fixed nominal inflation mechanism. New FNR tokens will be added to the network at a rate of 1% per annum. Each week the protocol will allocate new FNR tokens to any account which has 0.05% more votes than the rest of the accounts.

Open source and simple API

Fincor blockchain will be developed as open source code. This will allow application developers to see, examine and adapt the code to their custom needs while developing their applications. We will also prepare an Application Programming Interface (API) in order to facilitate the integration of developers' applications with the Fincor ecosystem. The open source code will also allow developers to contribute to the improvement of the entire blockchain.

2.9.2. Fincor blockchain deployment

Fincor protocol will be deployed in three clearly defined steps:

1

Configuration and optimization of the testnet based on the preFCP protocol

At this stage, we will create a network to test the preliminary version of our native preFCP protocol and optimize the core to increase the number of transactions per second (TPS). We will test the entire system for maximum compliance with the architecture and tasks of our blockchain requirements.

Creation of a Duplication with validator nodes on the PBFT (Practical Byzantine Fault Tolerance) consensus protocol (beta version)

At this stage, we will create and conduct tests of the beta version of the Duplication which ensures the functioning of the system of validation and distribution of nodes in shards using the PBFT consensus protocol (Practical Byzantine Fault Tolerance).

2

Creation of a Duplication layer with validator nodes on the PBFT (Practical Byzantine Fault Tolerance) consensus protocol (final version)

At this stage, we will launch the final version of the Duplication for the test network of our own FCP consensus protocol.

Customization and optimization of the Mainnet (mainnet) based on the preFCP protocol version

At this stage, we will be able to provide first users with access to the protocol functionality, and they will be able to enjoy all the benefits of all the services integrated into the Fincor platform: banking, fiat/cryptocurrency exchange, DEX exchange.

Configuration and optimization of the testnet based on the full version of the FCP protocol

At this stage, we will test the entire network with the use of sharding technology – to expand the system bandwidth and increase the number of transactions per second (TPS) to 10,000 transactions.

3

Customization and optimization of the Mainnet (mainnet) based on the FCP protocol version

At this stage, we will provide users and developers with access to a full-fledged version of the FCP consensus protocol for interacting with platform-integrated services.

Configuration and optimization of the Internet of things (IoT) network

At this stage, we will create optimized API for integration by IoT solution providers.

Launch of new generation smart contracts

At this stage, we will make smart contracts available for everyone. Thanks to a special form (algorithm) on the site, any user (developer, entrepreneur) will be able to quickly create a smart contract on his/her own, using one of the available templates.

Next generation blockchain

We will be developing our own blockchain using dynamic sharding and Lightning network technology.

The implementation of dynamic sharding technology will allow our blockchain to transfer shards between nodes in accordance with traffic. This will allow us to increase the number of transactions per second to the level of the leading international payment systems with guaranteed increased security.

The use of the Lightning network technology will allow users to create payment channels between any two parties at an additional level without having to write each transaction to the blockchain ledger. Thanks to this, transactions will be executed almost instantly and users will enjoy lower fees.

2.9.3. Additional comments on Fincor protocol IoT applications

Why IoT is so important?

<2 min reading

A modern blockchain should first of all be able to process a lot of transactions. Indeed, according to analysts of International Data Corporation, 20% of all deployable Internet of Things (IoT) devices in the world will be equipped with affordable basic blockchain services by 2019²³. The global era of micropayments is coming, where home appliances will be able to order and pay for repairs, products, etc. IoT can also be leveraged in the medical and industrial sectors. We could not ignore such prospects for the Fincor platform, connecting the IoT technology with our blockchain.

Fincor's IoT

We plan to implement an IoT network. It will allow us to automatically integrate data from various IoT devices in the network and implement an automated micropayment system. Thus, we will create a distributed system for interactions between IoT devices and Fincor's financial ecosystem.

This solution, simplifying the process of micropayments and reducing costs associated with processing and validating transactions on the blockchain, will allow us to become partners with leading players in IT industry.

Therefore, we offer users only real, proven technologies and solutions for IoT. These solutions are open sourced for developers to modernize the economy. Fincor has far-reaching plans in the area of Internet of Things, so we don't have any time for fantasies and theories, where a number of other blockchain projects are banking on wishful thinking alone.

2.10. Transparency and compliance

WE ARE HERE NOT TO CHILL IN THE SHADOWS

~1 min reading

The Bank of Lithuania, the Central Bank of the Republic of Lithuania and a member of the European System of Central Banks, is considered to be on the forefront of the next era of the finance industry.

As stated by the Bank, development of a FinTech-conducive regulatory and supervisory ecosystem, as well as fostering innovation in the financial sector, is one of the Bank of Lithuania's strategic directions²⁴.

With this in mind, and unlike many other blockchain-related businesses, Fincor has no intention of abusing grey areas of a still rather under-regulated industry. Instead, we aim to cooperate with various financial authorities to ensure that our technological solutions, financial products, as well as overall performance – and obligations – meet the notion of fair and transparent business.

²³ <https://www.idc.com/research/viewtoc.jsp?containerId=US40755816>

²⁴ Bank of Lithuania: <https://bit.ly/2GBGnJw>

Furthermore, following the launch of the crypto exchange, P2P lending platform and payment card services, we will also aim to ensure maximum transparency of our activities by conducting a continuous audit by independent accounting firms.

2.11. UI/UX 24/7 AI VA

WE ARE HERE TO OFFER SEAMLESS EXPERIENCE WITH LIGHTNING SPEED

First of all, forget bank holidays. If you need to transfer funds from your Fincor IBAN account to another Fincor user, it's just a matter of seconds, regardless of the time of the day or day of the week.

Secondly, with the approval of the Bank of Lithuania, Fincor will join the bank's CENTROLINK system which gives payment institutions access to the Single Euro Payments Area (SEPA). This will allow Fincor customers from Europe to transfer fiat instantly from their Fincor accounts to accounts in other payment institutions and banks across the European Economic Area (EEA).

Another noticeable feature of the entire Fincor ecosystem is a friendly User Interface and User Experience (UI/UX). Previously, some online banking and exchange platforms might have offered a decent technological solution, but for customers, those were an absolute user experience disaster with complicated functionality and savage design.

We, on the other hand, are focused on making our ecosystem genuinely user-friendly. With the help of the experienced UI/UX designers team, we will dedicate as much effort to user experience as to technological and security aspects of product development.

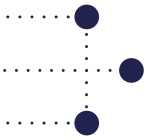
Also, forget the manual typing of cryptocurrency pair codes before each trade. Our exchange will eliminate such flawed processes with pre-defined pair templates to deliver an excellent user experience.

Of course, user experience is not only about appealing and easy-to-use interfaces. Clients also expect fast and in-depth customer support. We will offer such support 24/7. And no, we don't mean a call center or online help chat – we are talking about your very own virtual assistant!

Powered by our Artificial Intelligence core and a vast database of data on exchange trading, online banking, and the Fincor ecosystem, the virtual assistant will be able to answer clients' questions instantly. At early stages, the assistant will be able to answer general questions on procedures, rules, fees. Later on, we expect the virtual assistant to be able to advise on more specific and complicated Fincor-related questions. Without a doubt, additional customer support will be available from day one.

Also, while our initial platform will be released in English only, the roadmap foresees multilingual support for the entire Fincor ecosystem in key markets in Europe, Asia, Latin America, Africa, and the Middle East.

~2 min reading



3. What's Done So Far

Unlike many blockchain projects out there, we walked the walk before talking the talk. For almost a year our team of experts in finance, security, and cryptography have worked together on developing key technological pillars on which the Fincor financial ecosystem will be based.

3.1. Smart Exchange

~1 min reading

Launched in July 2018, our smart exchange provides a platform for trading cryptocurrencies. Live alpha version can be accessed [here](#)*. It features a unique intuitive user interface with lite features for quick and easy cryptocurrency purchases for novice customers as well as advanced features tailored for crypto professionals. Our exchange is accessible on both mobile and desktop environments. While designing Fincor user experience, we spent countless hours to make our exchange the most convenient environment to trade, where every function you need is at your fingertips and only one click away.

From day one, all Fincor customers can trade four pairs of the most popular cryptocurrencies: XRP/BTC (Ripple/Bitcoin), LTC/BTC (Litecoin/Bitcoin), ETH/BTC (Ethereum/Bitcoin), BCH/BTC (Bitcoin Cash/Bitcoin).

Security is essential for us. Therefore we've launched the alpha version with most of the planned security measures already deployed. Fincor customers can confirm identities using our KYC process both on mobile and desktop devices, set 2FA security for logging/trading/withdrawals, use our secure trading environment with DDoS/men-in-the-middle, etc. attacks prevention or even connect to Fincor via our 'Secure Access' technology**.

3.2. "Secure Access"

~1 min reading

We've been working on our native 'Secure Access' solution in parallel to our main exchange functionality. With 'Secure Access' we're bringing military-grade security to the masses. Security solutions that used to be available only for the institutional financial markets participants are now accessible to everyone. We are proud to offer 'Secure Access' to all of our users. While we originally designed "Secure Access" for our corporate clients and High Net Worth Individuals, we've decided to offer it to everyone. No matter if you have a million, two million or a few thousand dollars, you have the right to manage your finances online securely. We won't go into the technical details here, as 'Secure Access' has already been extensively covered in section 2.2.1. All Fincor customers can already request 'Secure Access' for their account and set up their own encrypted USB keys. These

* <http://exchange.fincor.io>

** For now, this feature is optional and accessible upon the individual request.

keys are decrypted directly on the RAM and establish a 3-layer encrypted connection directly with the particular customer's environment on Fincor servers. Our customers will get the same security as if trading in our data centre connected directly to our trading engine.

3.3. AI trading bots

<2 min reading

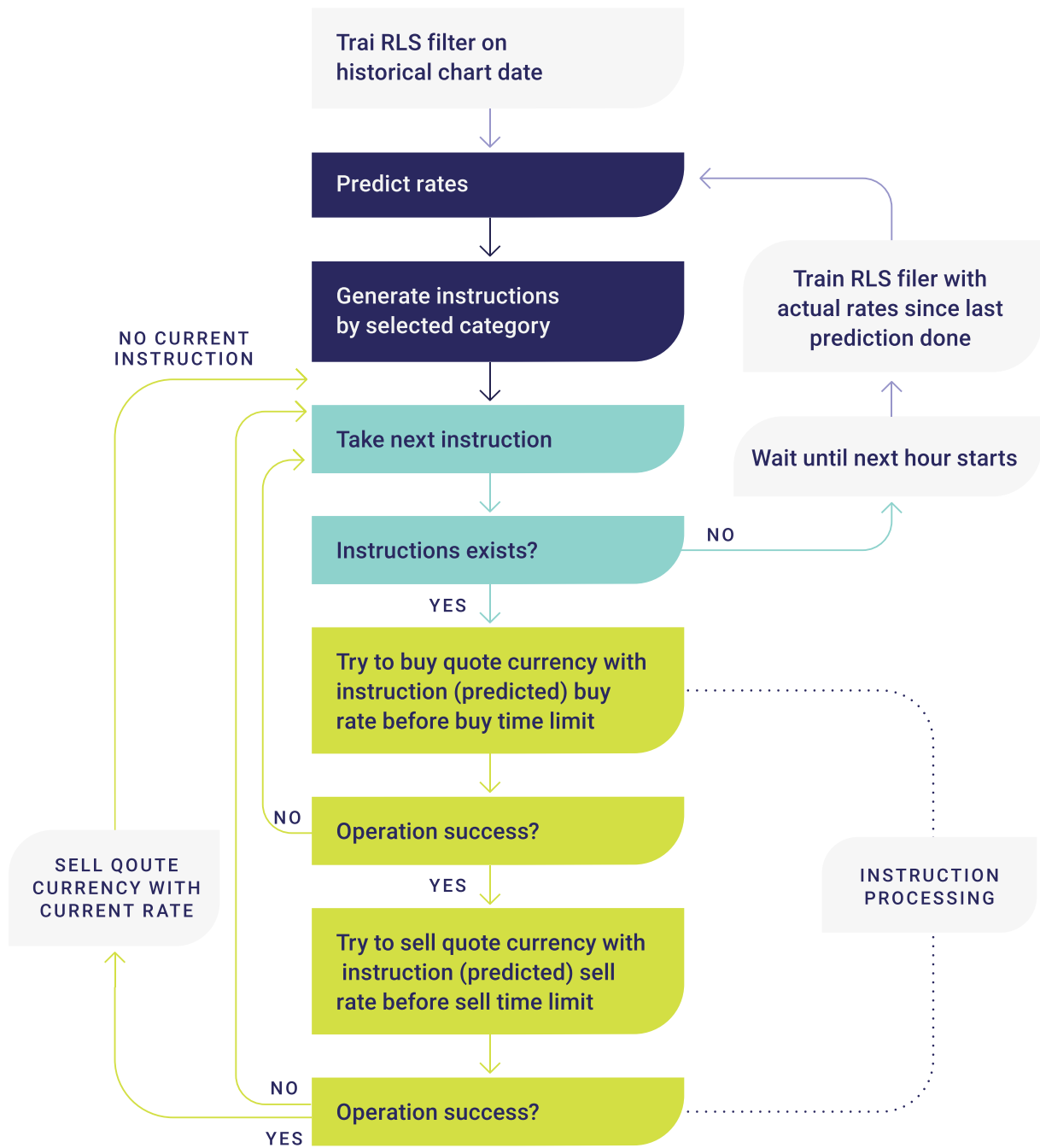
Artificial Intelligence solutions are another major building block of the entire Fincor ecosystem. It will power many of our services from smart insights for our exchange customers to assisted decision making for crypto funds managers, background checks for P2P lending and cybersecurity risk prevention and mitigation. However, instead of having a nice theory on how great it will be, we started building. We invested in our own Artificial Intelligence laboratory which has already developed and deployed the first AI trading bots which generated positive returns beating overall market performance. Unlike typical bots, AI bots will not only execute user-defined actions, but will also analyze the performance of other traders, as well as external triggers, including breaking news, industry reports, and market fluctuations. This will allow the system to advise traders on potential opportunities or alarm them of potential risks.

Artificial Neural Networks (ANN): Computing systems based on biological neural network principles and aimed at performing configuration recognition, discriminant function analysis, clustering method identification, decision making, forecasting, etc. Considering the ever-changing environment of digital money markets, ANNs are a must-have system to instantly react and adapt to market changes, as well as forecast potential fluctuations.

Artificial Intelligence System: A system based on ANNs and machine learning algorithms which analyses mathematical models of cryptocurrency trading. Our system is developed on .NET Framework and includes the following inter-connected modules:

- **UPDATER** – collects data from 130 different sources (news, thought leaders, trading volumes, exchange rates, etc.) to form and constantly update the system's database;
- **ANALYZER** – AANN-based AI analyzes data provided by the Updater module, generates 12-hour exchange rate forecasts and prepares trading orders;
- **TRADER** – executes automatic trade orders based on instructions received from the AI's Analyzer module.

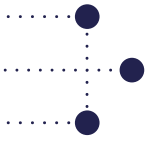
AI-powered automated trading strategy example which generated high earnings while the market was down:



3.4. Fincor blockchain with native FCP consensus protocol

<1 min reading

Our team of cryptography experts has done extensive research into the currently available blockchain solutions as well as most recent technical proposals for various technical scalability solutions. Using these, the team subsequently wrote a detailed research paper which outlines our native FCP consensus protocol (based on Federated Byzantine Agreement); and it's technical implementation, sharding mechanism enabling Fincor blockchain to reach 10k+ transactions per second throughput as well as lightning network mechanics.



4. Use of Funds & Investments

4.1. Capital needs

<1 min reading

We chose not to include capital needs information in our official publicly available documents due to the highly sensitive nature of this information. Detailed company growth projections and capital needs requirements will be provided upon individual request to the parties interested in taking part in Fincor fundraising.

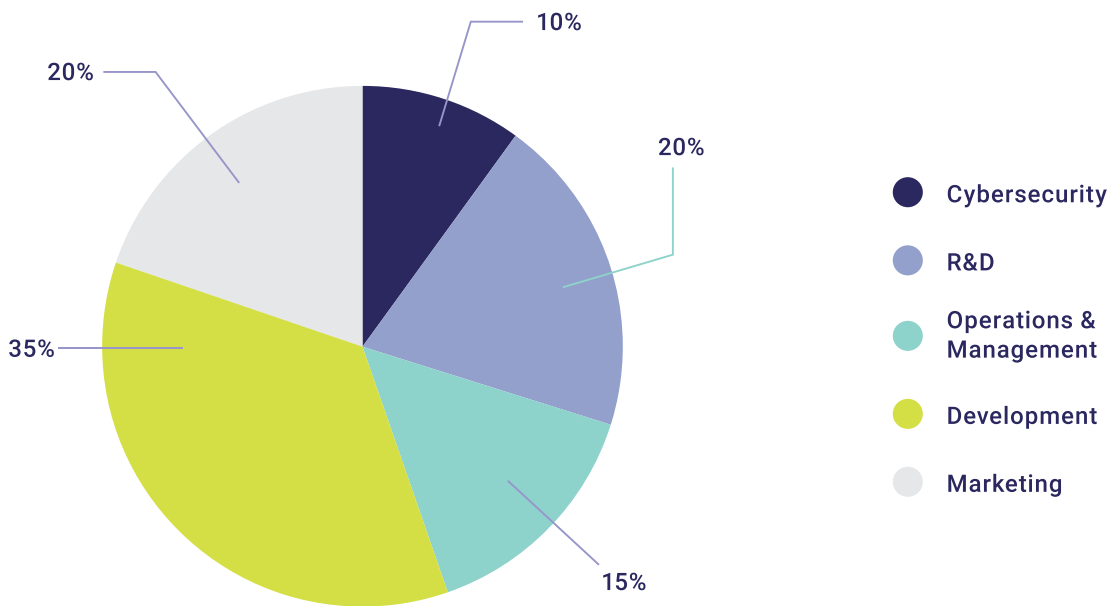
4.2. Use Of Funds

~1 min reading

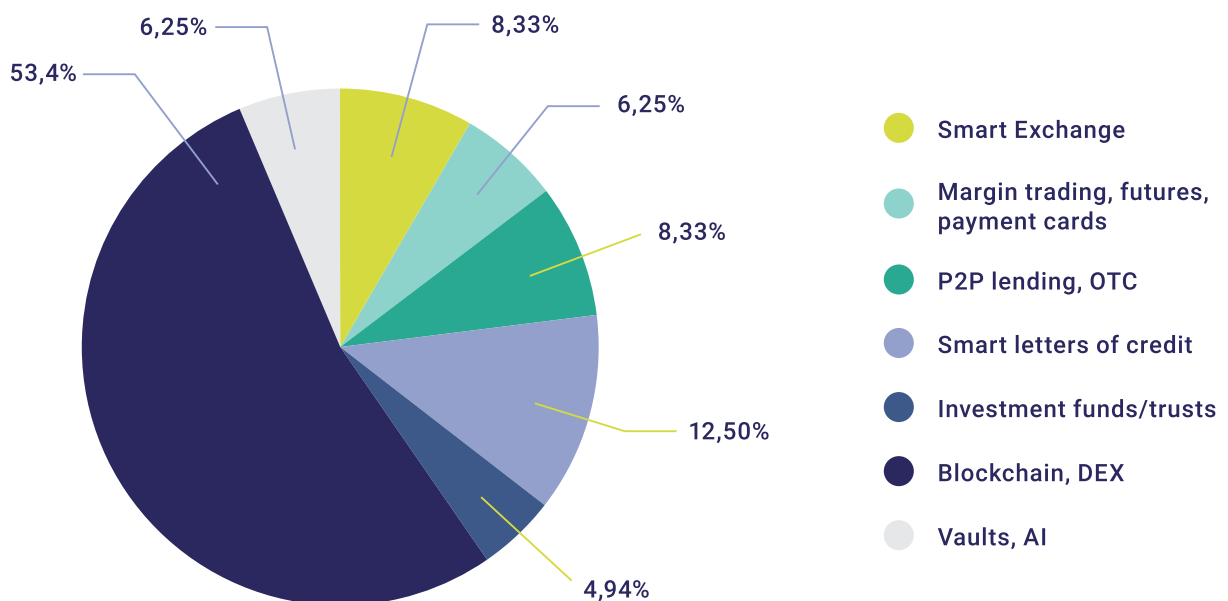
Fincor is a technology-first company. Therefore 55% of the funds will be used for continuous research and development. These investments will be used to expand our team of developers and focus on strategic pillars: finalizing development of our exchange engine with the aim to move from an alpha to a full-featured exchange version in Q2 2019, development of the crypto-backed P2P lending platform, investments services range expansion and our native blockchain deployment.

With cryptocurrencies becoming a familiar concept among the general population, simply having a service related to cryptocurrencies or blockchain in general, won't guarantee natural traction or success. Blockchain-based financial products developers will need to strengthen their marketing competencies with the aim of turning their products into household brands. Most of the currently biggest crypto exchanges got traction in the early days because they were the first to launch in an unsaturated market (crypto community a few years back was somewhat of a niche) and thrived on word-of-mouth. However, as more consumers enter the crypto space and competition intensifies, such competencies as brand development, user acquisition and retention, will be essential for any brand's success. This is why we will dedicate 20% of the budget to marketing. These funds will be used to scale our internet marketing team including user acquisition experts. The team will develop and launch a user acquisition strategy with clear metrics to measure the efficiency of our efforts and constantly improve our activities.

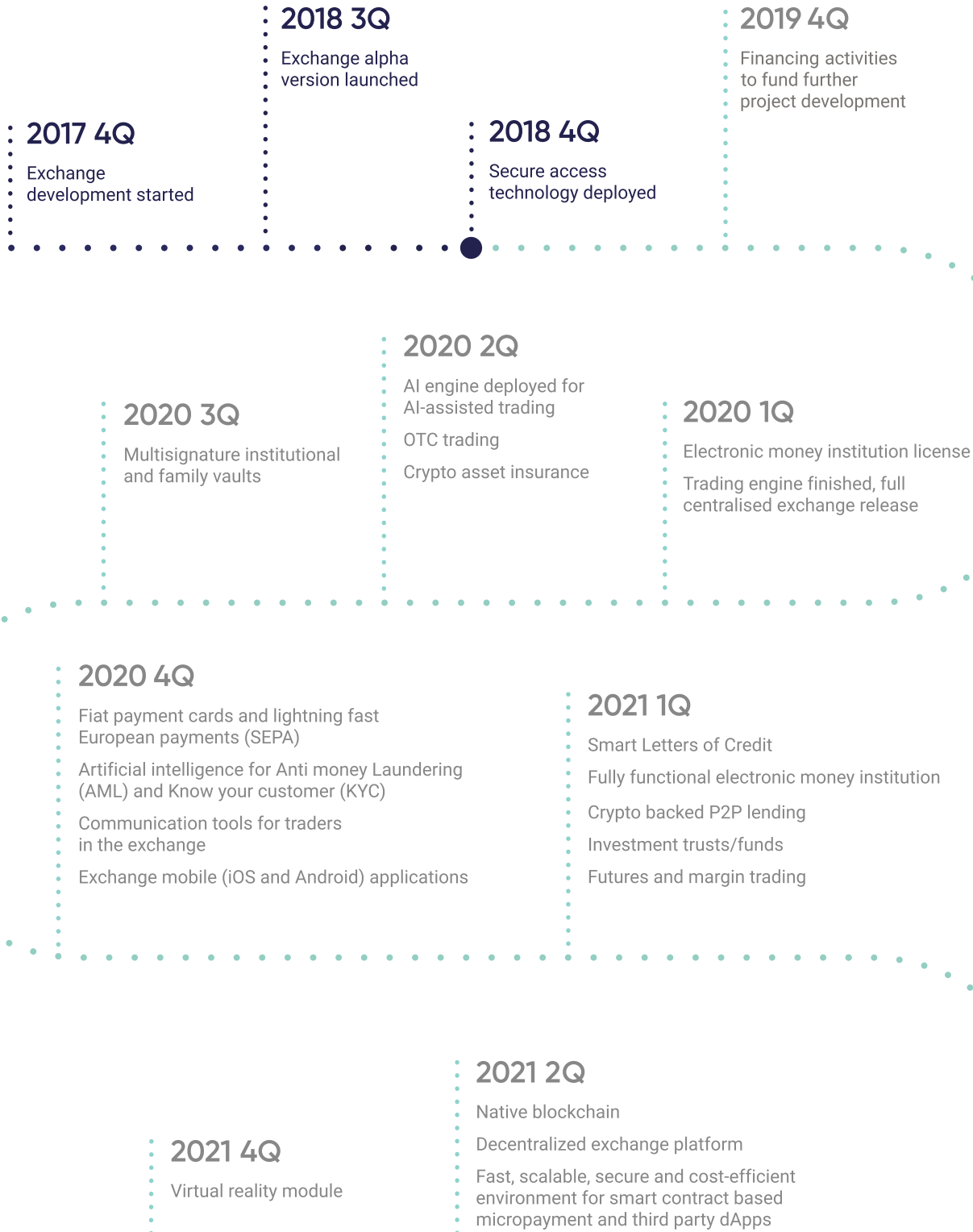
4.2. Use Of Funds



4.3. Investments by service line



5. The Road Map



6. The Team

Outstanding expertise in the finance, technology and cybersecurity sector are the key to developing Fincor as a state-of-the-art ecosystem for smart financial services. That is why we have gathered a strong team of leading finance experts, blockchain developers, AI and data scientists, as well as cybersecurity experts from around Europe.

Long-standing experience in finance, business development, law, and customer support, coupled with strong competence in blockchain technologies and cybersecurity, will allow to polish the technologically advanced Fincor ecosystem according to the real needs and expectations of users.



Skirmantas Jareckas, co-founder
CHIEF EXECUTIVE OFFICER / [in/skirmantasjareckas](#)

Business management professional with more than 20 years of executive experience in treasury and financial industry. Under his guidance as the CEO and the Chairman of Board, one of the leading banks in the Baltic States – Citadele – was named the Best Customer Service Provider among Lithuanian banks in 2015 & 2016. Skirmantas and his team also introduced new concepts of banking space, e.g., by sharing it with one of the region's largest coffee shop chains.



Tomas Liesis, co-founder
CHIEF BUSINESS DEVELOPMENT OFFICER / [in/tomasliesis](#)

Tomas has an exceptional leadership skills. Over ten years in various business he has successful record in major investment and business projects. Tomas has successfully executed long-term organizational strategic business and sales goals, built key customer relationships, identified business opportunities, negotiated and closed business contracts.



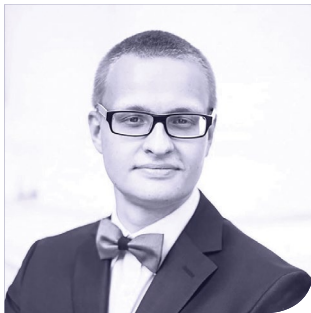
Michael Osterloh
CHIEF OPERATING OFFICER / [in/michaelosterloh](#)

For almost two decades Michael has been working in various technology and finance companies, including one of the world's leading exchange organizations Deutsche Börse Group. While holding various executive positions, including those of CEO, Michael proved to be a top-class manager of both strategic and daily operations, as well as a visionary developer of new business solutions.



Mindaugas Matulionis
CHIEF SECURITY OFFICER

Being a high-level cybersecurity expert Mindaugas' professional background includes 20+ years of developing, integrating, maintaining and improving security systems for governmental and private telecommunications networks. Having held various positions, including the one of an authorized consultant to the EU Parliament on areas of telecommunications and security, Mindaugas holds exceptional expertise which will be used in building security systems for Fincor's physical and digital infrastructure.



German Stogniiev
CHIEF TECHNOLOGICAL OFFICER / [in/germanstogniiev](#)

As a C-Level executive German has been working within various blockchain projects and AI startups, including the development of cryptographic information protection tools, e-commerce, autonomous drones, multispectral cameras, AI cloud platforms and blockchain-based payment systems. At Fincor, German has built a team of developers leading the Fincor technology development for all key service areas: crypto smart exchange platform, P2P lending platform, OTC market, crypto vaults, native blockchain and much more.



Vladislav Polikarpov
LEAD TECHNICAL ARCHITECT / [in/vladislavpolikarpov](#)

More than six years experience of full stack developer. He is a lead technical architect who works with multiple projects and teams on problems that require broad architectural thinking. Vladislav is responsible for leading the technical design of services and systems, justifies and communicates his design decisions. At Fincor, Vladislav is bridging the gap between technical and software architecture. His mission is to translate business problems into technical designs, to create an optimal design through an iterative process, aligning the user need with the system requirements and organisational objectives.



Evaldas Petraitis
CHIEF LEGAL OFFICER / [in/evaldaspetraitis](#)

An experienced lawyer with years of practice in one of the Baltic states' leading law firms, Evaldas specializes in financial regulation, with a particular focus on venture capital markets. He is also one of few national experts who specialize in the evolving blockchain regulation. Evaldas will lead Fincor's compliance team which will ensure that the ecosystem meets all requirements and standards set by the Bank of Lithuania and other national and European regulators.



Lukas Pultaražinskas
TAX ATTORNEY / [in/lukaspultarazinskas](#)

Having worked at one of the Big 4 - PwC, - as well as Lithuania's Customs Department and one of the region's leading law firms, Lukas possesses an extensive expertise in European tax management practices and regulations. Together with legal and finance teams, Lukas will ensure Fincor's tax transparency and compliance with national and international tax laws.



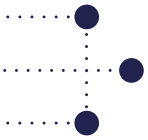
Roman Dushkin
HEAD OF AI LABORATORY / [in/roman-dushkin](#)

Being an Engineer-Mathematician, for almost 20 years Roman has been working in various large-scale projects related to Artificial Intelligence and automated management systems. Roman is a member of several Artificial Intelligence, Cryptocurrency and Blockchain-related associations, he also held numerous leading positions in private and governmental organization being responsible for development and integration of innovative and AI-powered services. At Fincor, Roman leads a team of AI scientists who already developed Fincor's own trading bots.



Aurimas Baltušis
HEAD OF UI/UX DESIGN / [in/aurimasbaltusis](#)

User experience and branding specialist. For the last 13 years Aurimas works with various web applications and product developments including banking system interfaces, payment and trading platforms, KYC (Know-Your-Customer) processes and booking systems. Aurimas leads an experienced team which will implement an exceptional user experience and design to Fincor's ecosystem.



7. Legal Disclaimer

~2 min reading

General disclaimer

Fincor project is highly risky and participation in Fincor token sale carries substantial risk and may involve special risks that could lead to a loss of all or a substantial portion of your allocated amount for purchasing the Fincor tokens. Do not participate in the Fincor token sale unless you are prepared to lose the entire amount you allocated to purchase Fincor tokens. Fincor tokens should not be acquired for speculative or investment purposes with the expectation of making a profit or immediate resale. No promises of future performance or value are made with respect to Fincor tokens, including no promise of inherent value and no guarantee that Fincor tokens will hold any particular value.

Fincor tokens are utility tokens and are not being structured or sold as securities or other financial instruments. This whitepaper is not a prospectus or disclosure document and is not an offer to sell, nor the solicitation of any offer to buy any security or other financial instrument in any jurisdiction and should not be treated or relied upon as one. There is no intention to register this Fincor whitepaper, Fincor tokens and the Fincor token sale under any laws of any jurisdiction. This Fincor whitepaper does not constitute advice nor a recommendation by any person related to Fincor project and its ecosystem, including Fincor token sale, to buy Fincor tokens.

This whitepaper is for information purposes only and is subject to change in response to numerous outside forces, including technological innovations, regulatory factors, and/or currency fluctuations, including but not limited to the market value of cryptocurrencies, and under any other reasons that we consider as reasonable in order to change this whitepaper.

We do not make and expressly disclaim all representations and warranties (whether express or implied by statute or otherwise) whatsoever, including but not limited to:

- any representations or warranties relating to merchantability, fitness for a particular purpose of Fincor tokens and Fincor ecosystem and its suitability, including that Fincor ecosystem may not meet your expectations, may have different features, functions, products, and services from the ones indicated in this whitepaper;
- that the contents of this whitepaper are accurate and free from any errors; and
- we shall have no liability for damages of any kind arising out of the use, reference to or reliance on the contents of this whitepaper, even if there are damages (direct and indirect) of any persons.

This whitepaper includes references to third-party data and industry publications. We believe that this industry data is accurate and that its estimates and assumptions are reasonable, however, there are no assurances as to the accuracy or completeness of this data. Although the data is believed to be reliable, we have not independently verified any of the data from third party sources referred to in this whitepaper or ascertained the underlying assumptions relied upon by such sources.

<1 min reading

Disclaimer regarding Fincor ecosystem development and ownership

Fincor ecosystem will be created, owned and developed by several entities, therefore certain elements of the Fincor ecosystem may be owned and developed by such separate entities, e.g. Fincor exchange may be owned by one entity and infrastructure of fiat payments will be owned by another entity and etc. Such foreseen separation is considered in order to mitigate legal risks as well to meet legal requirements under the applicable laws for legal operation of the Fincor ecosystem. However, such separation of activities/ownership is not going to mitigate Token holders' rights to use full functionality of the Tokens in the Fincor ecosystem.

~1 min reading

Disclaimer regarding Fincor tokens

Fincor tokens are structured exclusively as utility tokens entitling holder of the Tokens to utilize the services and products provided by Fincor ecosystem, therefore Fincor tokens do not grant any other rights to the Fincor token holders. Fincor tokens are not securities (for example such as shares, equity, bonds) or any other investment or financial instrument. As a result Fincor tokens do not provide any of the following rights whether in respect of the Tokens distributor or any other person: (i) to receive funds whether it is in form of dividend or any other payments by the fact of passively holding tokens, (ii) voting or decision making rights, (iii) right to the assets in case of liquidation or bankruptcy (except if such right of the token holder arise as to the creditor under general application of laws), (iv) right to acquire or sell any transferable securities (e.g. options or futures) or gives rise to cash settlement, (v) to represent an asset or part of it (e.g. token representing part of a real estate, i.e. derivative instruments), (vi) to convert token into any type of security, (vii) any other rights, that are provided by securities or other financial instruments.

~3 min reading

Disclaimer regarding regulatory and licencing

Certain Fincor financial ecosystem services and products are and in certain cases may be subject to various legal restrictions and requirements of the applicable laws. Certain licences have to be issued by the surveillance authorities (such as the Bank of Lithuania or other authorities in other jurisdictions) (the Licences) in order to legally provide regulated Fincor ecosystem financial services and products thereof. Taking into regard, that in Lithuania and in some cases in other jurisdictions, persons who provide financial services shall not engage into cryptocurrency (including such as Fincor tokens) related activities or could do so only by actually (physically and/or legally) separating financial services from cryptocurrencies related activities, Fincor may not be able provide certain Fincor ecosystem financial services and products or do so (if it is possible) only by separating such financial services from cryptocurrency related activities, e.g. establishing a new entity, creating new brand and removing other circumstances which relate financial services with cryptocurrencies. Therefore certain or the most of the regulated Fincor ecosystem financial services may be provided only upon reception of required Licenses and in certain jurisdictions or may not be provided at all. Moreover, taking into consideration that certain jurisdictions, such as United States, Canada or China (this list is not exhaustive), are not favourable to cryptocurrencies, in these jurisdictions nor

Fincor tokens, neither Fincor ecosystem products and services may be offered and provided at all. Below are indicated Fincor financial ecosystem services, products and activities, which are or may be regulated financial services under applicable laws and can be provided only after respective Licences are received:

1. crypto-backed P2P lending platform;
2. gold (including crypto/gold), futures trading;
3. fiat currencies operations and fiat payment cards;
4. investment trusts/funds;
5. smart contract based Letters of Credit;
6. other services to be provided by Fincor, if they are licensed under applicable laws.

If for certain Fincor services and products Licences are required, Fincor upon its decision will not provide and deliver such products and services respectively until respective Licences are received. Therefore Fincor financial ecosystem may not have features, services and products described in the Fincor whitepaper and persons acquiring Fincor tokens will undertake all related risks at their own expense thereof, if certain Fincor financial ecosystems elements, services or products are not provided and developed.

Fincor may decide to amend the intended functionality of its ecosystem, tokens in order to ensure compliance with any legal or regulatory requirements to which we are subject.

About Fincor

Fincor will operate from the European Union, particularly from Lithuania, unless due to regulatory requirements its activity and Fincor's ecosystem should be moved to other jurisdiction.