

WHITEPAPER

September 2018



Your Gateway to
the **Internet of Value**

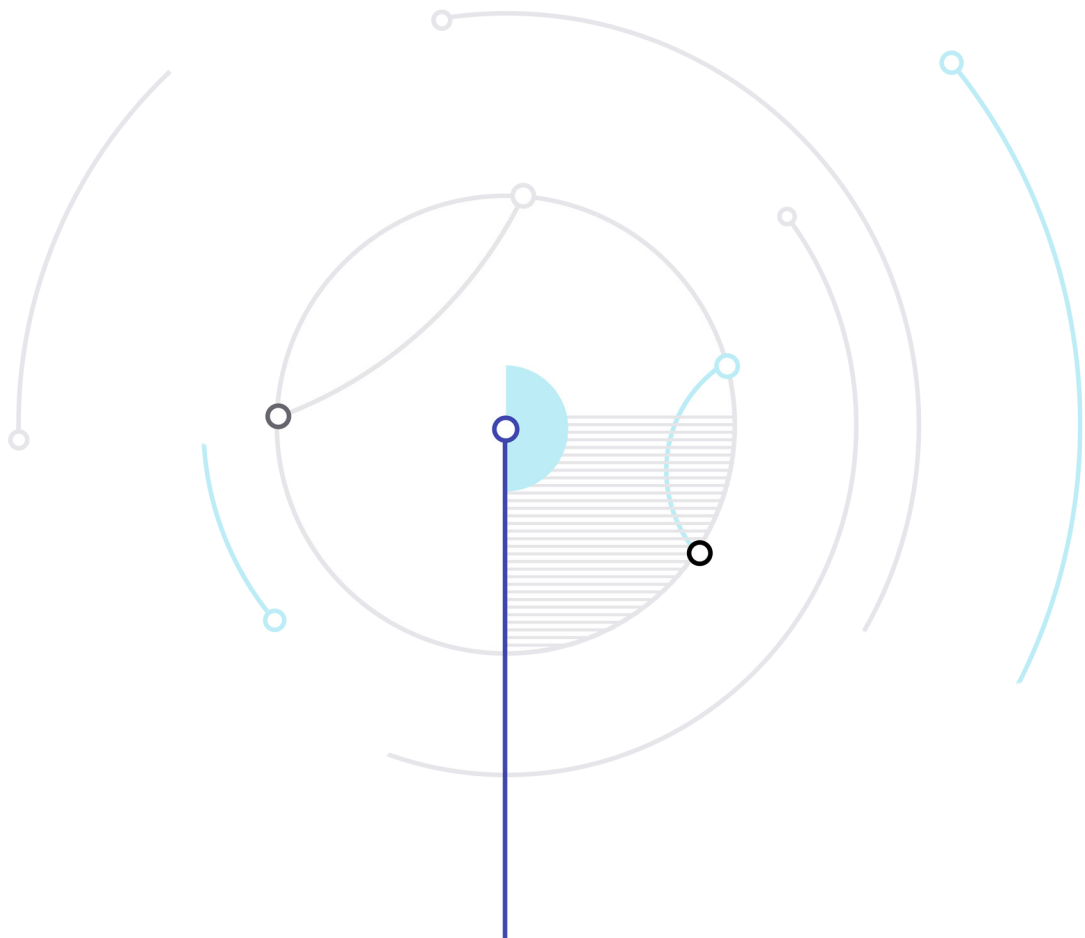


Table Of Contents

Table Of Content	2
1. Disclaimer	4
2. Abstract	5
3. Market Vision	6
Cryptocurrencies Power The Internet Of Value	7
Cryptocurrencies With A True Utility Will Thrive	7
Cryptocurrency Exchanges Enable Users To Navigate The Internet Of Value	8
4. Crypto Exchanges' Problems That Blockchain.io Aims To Fix	10
Security Breaches	10
Non-Compliance	11
Opacity	11
Outages	11
5. Blockchain.io's Key Claims	12
Highest Security, Reliability, And Accountability Standards	12
Aiming For European Leadership	12
Combining A Centralized Exchange With Decentralized Settlement	13
Offering Liquidity Services	13
Leveraging Advanced Cryptographic Protocols	14
Compliant And Ready For Mainstream Adoption	14

6. The Blockchain.io Project In Detail	16
Blockchain.io Main Functionalities	16
Essential Features	17
Advanced Cryptographic Protocols	21
Business Model	23
Blockchain.io Roadmap	26
Team	27
Advisors	30
Partners	37
Annex 1 — Relationship Between Blockchain.io & Paymium	40
Annex 2 — Glossary	41

1. Disclaimer

Paymium (or any Paymium affiliate assignee of Paymium) is launching a new Cryptocurrency Exchange project, called "Blockchain.io" (BCIO), which gives rise to the issuance and sale of certain Tokens to Participants through a Token Sale governed by these Token Sale terms and conditions.

The Token Sale presented by Paymium poses several risks to Tokens buyers, in particular that of losing all amounts traded for Tokens.

Only those who are fully aware of, and agree to these risks should participate in the Token Sale.

Note also that the Token Sale excludes certain groups of people such as persons that are (i) not Participants or (ii) "U.S. Persons" unless the U.S. Persons are Accredited Investors.

Neither the Autorité des Marchés Financiers, nor the U.S. Securities and Exchange Commission, nor any other regulatory body has approved the Token Sale or this document. Any representation to the contrary is unlawful.

Neither the Token Sale nor any related document constitutes an offer to sell, or the solicitation of an offer to buy, Tokens in any jurisdiction where it is unlawful to make such offer or solicitation.

2. Abstract

Blockchain.io is your gateway to the Internet of Value.

In the coming Internet of value, decentralized blockchain-operated value networks will become mainstream and compliant, enabling billions of Internet users to exchange value as quickly and as easily as they exchange information today.

Multiple cryptocurrencies will co-exist. Each cryptocurrency will serve the needs of a community of users to securely trade any type of assets, rights, goods, or services that is of value to them in a decentralized value network, i.e. without supervision by a central authority.

As a cryptocurrency exchange, Blockchain.io will play a major role in the Internet of Value's ecosystem. It will be the marketplace where cryptocurrencies will be traded against each other, a gateway to and a bridge across the multiple value networks powered by different blockchains/cryptocurrencies such as Bitcoin (BTC) and Ether (ETH).

Blockchain.io will combine the efficiency of a low-latency full-featured centralized exchange with decentralized "trustless" cross-chain settlement. The project leverages the latest developments in cross-chain atomic swaps, cryptographic protocols, and payment networks such as Lightning and Raiden. These developments will overcome the scalability issues of decentralized blockchains, allow transactions across heterogeneous blockchains, increase the speed and lower the cost of these transactions, making them ready for mass adoption.

Blockchain.io is driven by the highly experienced team of cryptocurrency experts who, seven years ago, founded Paymium, a fiat/bitcoin exchange catering to the underserved Euro market. Blockchain.io shares Paymium's highest security, reliability, and accountability standards. It strives to overcome the shortcomings of rival crypto exchanges that have repeatedly caused severe losses for issuers and token holders. To achieve this, the team relies on its advanced knowledge of cryptographic technology, its operational in-depth understanding of the crypto world, and a strong company culture committed to security and compliance.

Together with Paymium, Blockchain.io aims to become the leading cryptographic exchange in Europe by 2020.

Part 1 — Why Blockchain.io ?

3. Market Vision



Bitcoin introduces a platform on which you can run currency as an application on a network without any central points of control. A system completely decentralized like the internet itself. It is not money for the internet but the internet of money.

— Andreas Antonopoulos

Welcome to the Internet of Value!

In the same way as the Internet redefined global communication, Bitcoin and other cryptocurrencies are now reinventing money and value transactions.

Before Bitcoin, money was defined by State sovereignty over a territory. From now on, any community can mint its own money in form of a cryptocurrency or digital token and start trading without any central supervising authority.

In 2017 alone, Initial Coin Offerings (ICOs) raised around \$5 billion. Each project was financed by a community of token holders who became its ambassadors. There are now already tens of millions of token holders.

Digital tokens are like better, smarter cash. They are programmable money. Immediately liquid, indefinitely fragmentable, and instantly transferable, they can be programmed to meet the needs of particular assets, rights, goods, or services or of specific communities. The coming years will see a multitude of cryptocurrencies. New cryptographic developments and payment applications will allow us to transact in all these currencies, with the traditional "fiat" currencies retaining their role as price anchors.

Exchanges will be the marketplaces where cryptocurrencies will be traded against each other and with fiat currencies. Cryptocurrency exchanges will be the bridges between blockchains powered by Bitcoin, Ether and other cryptographic protocols.

We confidently expect the Internet of Value to gain mass adoption, just as the free peer-to-peer networks that preceded it on the Internet, namely email and the Web, did.

The Internet of Value will trigger new waves of innovation in financial systems and beyond. It will bring financial inclusion to the billions of people who are still unbanked today.

Pierre Noizat, February 2018

Blockchain.io's vision of the Internet of value is built on clear and distinct paradigms:

Cryptocurrencies Power the Internet of Value

In Blockchain.io's vision the Internet of Value is the next level of evolution of the Internet. The internet of value enables users to securely trade assets, rights, goods and services, globally and around the clock, without the involvement of a centralized authority, or traditional financial intermediaries, or so called 'trusted' third-parties.

The Internet of value is built on multiple decentralized, automated, transparent, and secure blockchain-based value networks. Different networks operate different versions of the blockchain, which in turn are fueled by different cryptocurrencies such as Bitcoin, Ether, or Litecoin. Each network meets the needs of certain types of transactions, such as high-value payments or title registry, or the needs of specific trading communities, such as a network of autonomous objects or an industry sector.

Blockchain.io as the leading exchange in the Internet of Value will enable users to trade across all these value networks.

Cryptocurrencies with a True Utility Will Thrive

Currently, the burgeoning cryptocurrency ecosystem is in accelerated motion and is encountering turbulences. Initial Coin Offerings (ICOs) have lowered the barriers to minting cryptocurrencies as tokens. Many ICOs have been hastily promoted and have flooded the market in large numbers. Buyers have rushed to buy in, often driven by the fear of missing out on the 'crypto' opportunity rather by an informed assessment of the value of the coin/project.

As of February 8, 2018, there were more than 1,500 cryptocurrencies with a total market

capitalization of more than \$400 billion, including 138 cryptocurrencies with a market value higher than \$100 million, of which 25 have a market value greater than \$1 billion.

The increased attention of the media and the general public for the crypto world has potentially created a short-term bubble. Yet, those digital currencies that have a true utility in contributing to the long-term growth and expansion of the Internet of value, such as Bitcoin and the leading altcoins, Ethereum, Ripple, and Litecoin, offer short and long-term growth perspectives that could offset losses caused by those that will fail.

Cryptocurrency Exchanges Enable Users to Navigate the Internet of Value

Cryptocurrency exchanges enable users to trade across multiple value networks powered by heterogeneous blockchains.

As the number of cryptocurrencies grows, cryptocurrency exchanges become the marketplaces for listing and trading cryptocurrencies. In the current context, users mainly buy cryptocurrencies as a store of value, in anticipation of a future value increase. As exchanges list multiple cryptocurrencies in one place, supply information about them, enable comparisons, and set bid/ask prices according to demand, they help separate the valuable cryptocurrencies from the useless ones. Investors become increasingly discriminate in their choices of cryptocurrencies as a store of value or as a utility token.

As technological and regulatory barriers to the Internet of value will be lifted, cryptocurrencies and decentralized value networks will gain mainstream acceptance. To trade on these different networks, users will need to buy multiple digital currencies and to exchange them as their needs evolve.

Blockchain.io will list a careful selection of cryptocurrencies: Proof-of-Work (POW) coins such as Bitcoin, Ether or Litecoin, Proof-of-Stake (POS) coins like Qtum or Stratis, Directed Acyclic Graph (DAG) coins, and other cryptographic protocols yet to be designed and minted.

The Internet Of Value

Proof of work coins

Miners solve complex cryptographical puzzles to validate transactions



BTC LTC ETH

Proof of stake coins

Miners validate transactions according to the wealth associated with their accounts



WAVES STRAT QTUM

DAG Coins

Blockchain-less. Each new transaction confirms one or more previous transactions



IOTA BYTE

Other cryptographic protocols

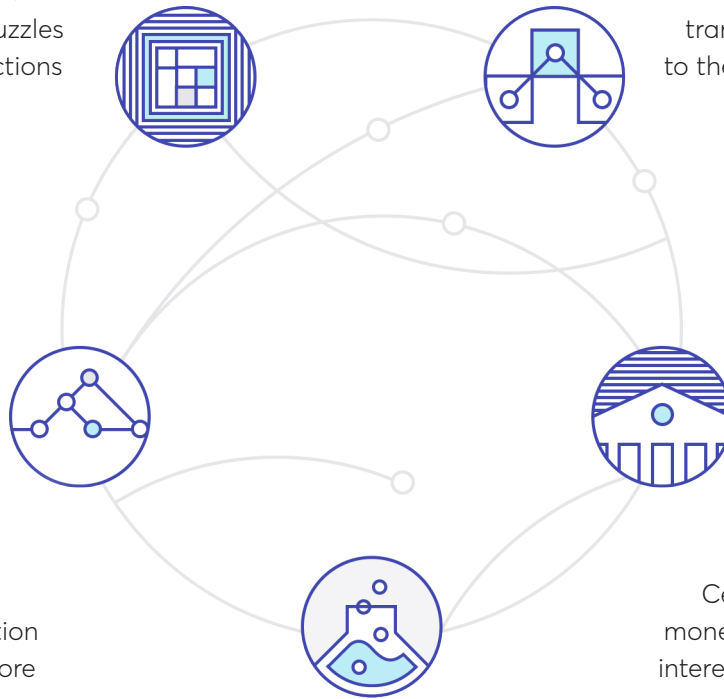
Fair exchange, decentralized settlement

FIAT Currencies

Central banks control monetary policy through interest rates and reserve requirements



JPY EUR USD



4. **Crypto Exchanges'** **Problems that Blockchain.io** **Aims to Fix**

Operating a cryptocurrency exchange is a multifaceted service business with distinct functions ranging from custody services to providing underlying information and trading facilities. More generally, the exchange must create a trusted environment that fosters transactions.

Unfortunately, hackers and fraudsters are constantly trying to break into exchanges which they see as the weakest link in the cryptocurrency infrastructure.

Faced by this challenge, many exchanges have shown themselves to be unsafe, unreliable, non-compliant, and opaque. Since 2011, over 1 million bitcoins have been taken from their rightful owners by hackers and fraudsters. Users of non-compliant exchanges had their accounts frozen or seized. Traders were faced with unexpected platform shutdowns and non-responsive, opaque management.

Regulators and institutional investors have pointed out these shortcomings which are currently hampering the growth of cryptocurrencies and cryptocurrency networks.

[Blockchain.io is determined to fix these issues:](#)

Security Breaches

- High volume crypto-assets platforms are constantly attacked by hackers who seek to bring the systems down, typically through DDoS attacks. Fraudsters also try to break into accounts using social engineering to steal cryptocurrencies from users.
- Many high-volume platforms could not withstand these attacks and were forced to shut down.
- Case in point: In August 2016, a large platform acknowledged the loss of 120,000 BTCs (bitcoins) for a value, at the time, of USD 75 million.
- It is estimated that since 2011, at least three dozen major heists against cryptocurrency exchanges occurred. Close to 1 million BTCs were stolen.

Non-compliance

- Many users had their assets seized or frozen due to platforms' lack of compliance with national and international laws and regulations.
- Case in point: An exchange had inadequate AML and KYC procedures. When the State of Washington decided to regulate Bitcoin exchanges, this platform chose to suspend the accounts of users from that State.
- Case in point: In September 2017, following a national ban by the Chinese (PRC) State, China's largest exchange suspended its operations.

Opacity

- The management and operations of some exchanges are opaque. They have very poor customer service and do not respond to user enquiries. Users are exposed to high risk and uncertainty, which creates massive tension as stress quickly spreads in the community.
- Case in point: In July 2017, the U.S. government brought federal charges against a platform for money laundering and operating an "unlicensed monetary service." The platform was shut down and reopened only once the full inquiry was completed and a court decision was made.
- Some exchanges operate dark pools (OTC or Off-Exchange transactions) and don't address price manipulations, therefore allowing some market participants to spoil others.

Outages

- Many platforms experience service outages in periods of high volatility. This obviously results in major losses for traders and investors.
- Case in point: In June 2017, a platform shut down for several hours causing a 25% decline in the price of both BTC and ETH.
- Case in point: In August 2017, following performance issues which caused a flash crash, a platform delisted tokens, suspended trading on currency pairs such as the ETH/GBP, and removed advanced functionalities such as its cryptocurrency borrowing facility and margin trading.
- After the outages, most exchanges simply try to resume operations as quickly as possible and seldom fix their accounting records or upgrade their server infrastructure.

Part 2 — The Blockchain.io Project

5. Blockchain.io's Key Claims

Highest Security, Reliability, and Accountability Standards

Blockchain.io aims to overcome the current shortcomings of the crypto exchange market by applying the highest standards in security, reliability, compliance, and accountability.

To achieve this, the team will rely on its advanced knowledge of cryptographic technology, its operational in-depth understanding of the crypto world, its strict discipline in software development, and its longstanding commitment to compliance and accountability.

The founders of Blockchain.io are a seasoned team with in-depth knowledge of cryptocurrency protocols. They pioneered cryptocurrencies in Europe in 2009. They subsequently created Paymium in 2011, making it the first European Bitcoin exchange. Paymium claims the highest standards in security, reliability and accountability, which will also be the hallmark of Blockchain.io.

Paymium has been operating hack-free since 2013. A company culture of commitment to security and technological competence are the underlying basis for this excellence.

In terms of compliance and accountability, Paymium is, to the best of our knowledge, the only crypto exchange whose financial accounts are fully audited by an external auditor with a European title equivalent to an American CPA. The platform applies on a voluntary basis, and complies with, European Banking requirements for anti-money laundering (AML) and know-your-customer (KYC) procedures.

Paymium and Blockchain.io offerings are a perfect pair and the logical next step to meet the rising expectations of the crypto world as it evolves into the Internet of Value.

Aiming for European Leadership

The European cryptocurrency market is still up for grabs and Blockchain.io is determined to lead it. Blockchain.io will naturally address the untapped opportunity of the currently

underserved European market. Europe represents only 7% of the global volume of fiat-to-bitcoin currency exchanges (Source: CryptoCompare, February 2018). Yet the European Union (EU) covers 28 countries with 510 million inhabitants.

European governments have adopted Fintech friendly policies. They regard blockchain developments as an extremely valuable tool to revamp financial services. Institutional and individual investors show a growing appetite for Bitcoin, Ether, and European ICOs. Most European regulators are open, with a wait-and-see attitude.

In Blockchain.io's vision, these factors bring extremely compelling evidence of the strong growth potential of the European market.

Combining a Centralized Exchange with Decentralized Settlement

Blockchain.io will be dedicated to exchanging cryptocurrencies against each other, a complementary offering to the founders' fiat exchange, Paymium.

The Blockchain.io platform will combine the new-generation technology of a centralized custodial exchange with decentralized "trustless" cross-chain "fair exchange" settlement. The centralized cryptocurrency exchange will be a low-latency, full-featured exchange with custody services, centralized order booking, and efficient order matching. As Blockchain.io grows, it will add more functionalities such as margin trading, proprietary lending, and peer-to-peer lending.

The decentralized cross-chain settlement will be based on cross-chain atomic swaps, i.e. cryptographic protocols that allow users to settle transactions across heterogeneous blockchain networks without 'trusted' third-party and without counterparty risk. This will represent a big departure from traditional markets and a major step toward the Internet of Value.

Offering Liquidity Services

Blockchain.io will jumpstart liquidity in three specific ways:

- ICO services offering to assist issuers with their ICO campaigns and ICO listings,
- Listing of other tokens (Non-ICO),
- Market making using Blockchain.io inventory,

- Custody and brokerage services for institutional clients,
- Incentive program for Paymium users to ensure the smooth and seamless transition of the community to the new services. The 170,000 accounts of Paymium will become the first community to access Blockchain.io services and the Internet of Value.

Leveraging Advanced Cryptographic Protocols

The Blockchain.io team will be the engaged drivers of the development of the advanced cryptocurrency protocols that will enable Blockchain.io's decentralized settlement.

Blockchain.io leverages research and development by the most prominent software developers who are entering the cryptocurrency ecosystem in droves. Among them, the teams at Lightning Networks, Tumblebit, and Rootstock are constantly improving on-chain and off-chain cryptographic protocols to enable atomic swaps through hashed timelock contracts (HTLC), payment channels, and sidechains.

These technologies enable seamless trading across heterogeneous blockchains fueled by cryptocurrencies of different nature such as POW, POS, DAG, and others, such as POB. They also provide solutions to the scalability issues of Bitcoin-based blockchain and massively lower the cost of transactions.

Compliant and Ready for Mainstream Adoption

The Blockchain.io and Paymium teams believe in a regulated future for cryptocurrencies 2.0.

While a few governments such as the PRC's have temporarily banned cryptocurrency exchanges, most national regulators, such as the SEC in the US and the AMF in France are seeking to define a regulatory framework for cryptocurrencies and ICOs. Gibraltar issued its own token. Japan licensed currency exchanges, while considering, like Estonia, issuing State-sponsored tokens for specific uses.

Blockchain.io strongly believes that cryptocurrencies will be regulated, in various forms, extent, and degrees, depending on the country or region. Our philosophy for Blockchain.io is to anticipate regulatory requirements and become the first exchange to be fully compliant as soon as relevant regulations are being issued.

Blockchain.io considers this as an essential feature for the successful course of business. The team has engaged in regulatory watch and conducts frequent discussions with various State authorities to educate them in cryptocurrency issues and to ensure that the key values of the crypto community are understood and respected.

Compliance and security are closely intertwined, as are the legal and technology standards they imply. Mastering both will unleash the potential of the cryptocurrency ecosystem and trigger mass adoption among institutional and individual investors.



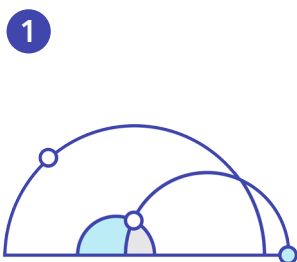
6. The Blockchain Project In Detail Overview

► Blockchain.io Main Functionalities

Blockchain.io aims to be the cryptocurrency exchange of trust for individual and institutional traders and investors. It aims to combine a state-of-the-art low-latency cryptocurrency exchange with advanced decentralized settlement using the latest “trustless” cross-chain trading protocols to settle trades without the need for a trusted third-party or counterparty.

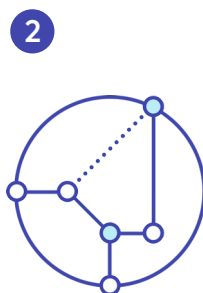


The **three pillars** of Blockchain.io's offering are:



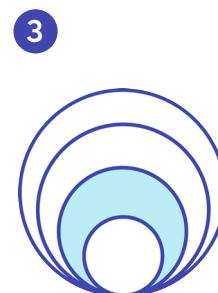
Cryptocurrency Exchange

With asset custody services, advanced trading features, and proven security procedures to protect customer databases, digital assets inventories, order book, and the order matching engine.



Decentralized Settlement

Fair-exchange (“trustless”) protocols allowing atomic swaps, i.e. atomic cross-chain trading of cryptocurrencies without the need for a trusted third-party. The decentralized settlement eliminates the counterparty risk.



Liquidity Services

Blockchain.io will offer listing services for selected tokens, i.e. tokens strictly vetted by technology and business due diligences. The company will also offer ICO services, such as the planning and execution of selected ICO campaigns, and market-making services.

► Essential Features

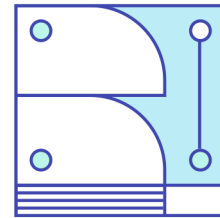
The **main features** of the cryptocurrency exchange Blockchain.io are:



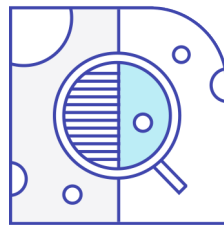
Ultra-Secure
& Decentralized



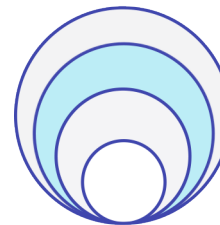
Fully Compliant
& Transparent



Reliable
Infrastructure



Select Digital
Currencies



ICO Execution
& Token Listing

Ultra-Secure & Decentralized

- The centralized part of the exchange offers highly secure custody services with cold storage and cryptographic proof of reserve.
- Cryptocurrencies are held in cold storage (offline) for at least 98% of reserves.
- A cold wallet access requires multiple signatures.
- A cold wallet private key is split and held in a number of different vaults in multiple locations.
- Other in-house security processes and technological features.
- Internal procedures protect the exchange from social engineering attacks. Periodic technical audits and timestamped logs allow detection of any tampering attempts in the accounting database.
- Periodic financial audits verify that the inventory of coins (assets side) matches the records of liabilities with cryptographic proof. If the exchange's customer balances

are checked against a blockchain inventory of coins (utxos in Bitcoin language) every block interval, there is little or no room for a rogue intruder to alter database records with profit.

- Decentralized settlement relies on fair-exchange protocols allowing atomic swaps of cryptocurrencies to eliminate the counter-party risk inherent to a custodial exchange.

Fully Compliant & Transparent

- Exhaustive accounting records are audited by independent professional auditors to ensure the integrity of the trading platform.
- The exchange aims to comply with all current applicable EU regulations, ensuring that assets never get seized or frozen.
- Customer balances on the liability side must match exactly the inventory of coins held by the exchange. Blockchain.io aims to perform such balance check and to publish its cryptographic proof at every block interval.

Reliable Infrastructure

- Minimal downtime, typically restricted to server maintenance, application upgrades, or database migration.
- Resilience under high volume, heavy traffic conditions, or DDoS attacks.
- No technical debt: exchanges that quickly add new altcoins or new features without proper testing or careful software design accumulate technical debt by taking shortcuts. Technical debt translates into applications that are harder to maintain and prone to bugs and security holes.
- Blockchain.io will attract high volume traders with specific features such as a FIX API and a borrowing facility, but also with the high level of availability of the trading platform.
- Processing capacity in the first phase will be of up to 2 million orders per day.

Select Digital Currencies

- Cryptocurrencies will be listed on the trading platform following a strict vetting process (sustainability, technical, and deep protocol review) by our team of blockchain experts.
- Regular updates and publications will inform platform stakeholders and the community through altcoin technical reviews and financial analyses.

ICO Execution & Token Listing

- Blockchain.io will provide ICO campaign support and token listing services to assist entrepreneurs and technologists in the planning and execution of their fundraising campaigns.
- Following the ICO campaigns, Blockchain.io will ensure that newly created tokens are listed on Blockchain.io to provide liquidity to investors and traders.
- In addition, Blockchain.io will create Token liquidity through:
 - Market making using Blockchain.io's inventory
 - Incentive program for Paymium users.

Blockchain.io will provide an intuitive trading experience catering to the needs of both individual and institutional traders and investors.

High Performance Matching

- High availability and high scalability of the trade matching engine will sustain a deep order book on all pairs of cryptocurrencies and process up to 2 million orders per day.

Basic & Advanced Orders

- A large variety of trade order types will address the needs of both beginners and expert traders.
- These will include market, limit, stop loss, take profit, trailing stop orders, self-cancelling and expiration orders.

Transparent Auctions

- Transparent cryptocurrency auctions will take place several times a day in order to bootstrap new cryptocurrency trading through a trustless price discovery mechanism.
- Market participants may place an auction-only market order, which will execute at the final auction price or input a limit order indicating the maximum buying price or a minimum selling price for their coins. The auction matches the aggregate buy and sell demands from all participating orders to determine the price ("cross-price") at which the largest quantity can be filled.

Peer-to-peer Lending

- Traders who need to borrow funds to trade on margin will be able to borrow from other platform users.
- Lenders will earn interest on borrowed funds.
- Interest rates will be set based on supply and demand using a centralized order book and an order management system.

Proprietary Lending

- Blockchain.io will maintain and manage a centralized inventory of cryptocurrency funds.
- These funds will be lent to platform users against interest.
- Funds will be made available for lending in the centralized order book and interest rates will be set using a supply and demand process.
- Funds from the centralized inventory may, on a case by case basis, also be lent to traders who need to borrow large amounts. These transactions will be closed over-the-counter.

Short & Long Margin Trading

- Traders may borrow funds to benefit from coin volatility by trading on margin.
- Margin trading can be used for short and long trades.
- Long trades will automatically be closed by the exchange when amounts invested exceed borrowing capacity. At this stage, the borrowed funds are automatically returned to the lender along with accrued interest.
- Traders who short-sell a coin may borrow this coin from another platform user or from the centralized inventory to sell it right away. A trader can borrow a coin for short selling only if a value in coin is locked by the platform to secure the trade. Once this security reserve is exhausted, the trade is automatically closed by the system and the borrowed coin returned to the lender along with the interest earned.



Advanced Cryptographic Protocols

Blockchain.io leverages the most recent developments in advanced cryptographic protocols and disrupts currency exchange technology by combining the best of centralized trading with decentralized settlement.

Advanced on-chain and off-chain protocols are designed to overcome some of the issues of scalability, trading latency, privacy, and cost of the original Bitcoin blockchain and to enable cross-chain trading.

Here are some of the cryptographic and other key technologies used by Blockchain.io:

"Fair exchange" cryptographic protocols

- **Atomic Swaps (AS):** AS enable users to trade cryptocurrencies across different blockchains directly, without a third party. AS are on-chain transaction protocols which utilize the concept of hashed timelock contracts (HTLCs). AS delay settlement time as trading parties choose their lock time. AS are good for infrequent large deals. In early AS implementations, trading parties needed to have the full blockchains of the two cryptocurrencies they wanted to exchange with each other in order to use AS.
- **Hashed Timelock Contract (HTLC):** HTLCs ensure that an atomic swap process is trustless by requiring a cryptographic proof of payment and payment receipt prior to a deadline after which the payment is cancelled.
- **Payment Channels:** Atomic swaps are possible only across blockchains that support payment channels. Payment channels allow for practically unlimited bidirectional transfers between two participants, as long as the net sum of their transfers does not exceed the deposited tokens. These transfers are off-chain transfers, except for the initial one-time on-chain deposit creation and the eventual closing of the channel. Two users connected to the Blockchain.io Lightning hub, could perform

atomic swaps between Bitcoin and another cryptocurrency through a fair exchange ("trustless") protocol only if the cryptocurrency traded for bitcoins supports payment channels. Successful cross-chain trading experiments include exchanging bitcoins with Lightning and ethers with Raiden.

- **Lightning Network (LN):** The Lightning Network (LN) protocol proposed by Tadeus Dryja and Joseph Poon in 2015 leverages the notion of payment channels to enable off-chain micro-payments. As such, it is a highly relevant scalability solution. The combination of the Bitcoin network with the layer-2 Lightning network has the potential to process millions of transactions per second. LN is suitable for frequent, small and regular transactions between two parties. The amount of money that can be traded between these parties is limited to the initial deposit. These funds are locked until the channel is closed, which is an on-chain transaction, hence a time delay may occur. LN requires mature routing technology such as the Flare routing algorithm developed by BitFury. Note that it's been argued that LN is not truly decentralized.
- **Tumblebit:** The Tumblebit protocol proposed by Ethan Heilman, Sharon Goldberg and al. in 2016 enables privacy-protected fair exchange trading through a hub, using HTLCs. Unlike Lightning, Tumblebit does not require Segwit as a transaction malleability fix, it therefore potentially supports more cryptocurrencies that use Bitcoin-like architecture. Users (Alice and Bob) escrow funds, say Alice escrows x BTC and Bob y LTC, with the non-custodial Blockchain.io Tumblebit hub then execute off-chain trades up to the escrowed amount and as long as the escrow has not expired. Crucially, the hub cannot steal funds.
- **RSK Sidechains:** RSK Labs has introduced smart contracts to the Bitcoin ecosystem to enable near instant payments and improve its scalability. A 2-way peg (2WP) allows the transfer of bitcoins from the Bitcoin blockchain to a Secondary blockchain and vice-versa. The "transfer" is in fact an illusion: bitcoins are not transferred, but temporarily locked on the Bitcoin blockchain while the same number of equivalent tokens are unlocked in a secondary blockchain. A security protocol ensures that the same bitcoins cannot be unlocked on both blockchains at the same time.

Elixir Programming language

- Blockchain.io uses the general-purpose Elixir programming language running on the Erlang virtual machine to enable robust design of distributed applications and embedded systems.

FIX

- The Financial Information eXchange (FIX) protocol is an international standard protocol for real-time securities transactions. The FIX API protocol was designed by and for institutional traders to vastly improve trading performance through lower execution time, multi-channeling (concurrent connections) and privacy (not disclosing trading algorithms).

Web, Mobile & Desktop

- The blockchain.io trading and charting platform will be available as a mobile application (iOS, Android, HTML 5), desktop application (Mac OSX, Windows, Linux) and web-based application.



Business Model

Blockchain.io will generate revenues from trading activities, lending, digital currency payments and ICO services. Basically, the time-tested business model of marketplaces and exchanges will be applied to new products and unique technology.

Trading

- Competitive two-way buy and sell fees on all exchange transactions conducted through the marketplace.
- Blockchain.io crypto exchange will seek to encourage market liquidity.
- Blockchain.io charges fees on both legs of the trade.
- Market maker fees are lower than taker fees.

Lending

- Cryptocurrency borrowing and lending will generate interest for lenders.
- Commissions apply to interest generated from borrowing from the centralized Blockchain.io inventory.
- Blockchain.io charges interest for lending from its centralized lending inventory.

Withdrawal

- Withdrawals requested by Blockchain.io users will incur a modest fee.

Payment transactions

- E-commerce and in-store payment transactions processed through Blockchain.io will incur a fee calculated as a percentage of the transaction.

ICO services

- Blockchain.io will charge consulting and transaction fees to project teams willing to be assisted by experienced legal, marketing, and finance professionals in the planning and execution of their ICO campaign.
- ICO projects will be pre-selected by Blockchain.io staff and approved/voted upon by the community.
- Criteria for project eligibility will be:
 1. Legal compliance of the project
 2. Team experience and background
 3. Company track-record
 4. Market potential
 5. Quality of the project
 6. Existence of a viable product
 7. Utility of the token
 8. Existence of a hard cap
- Blockchain.io will structure the entire operation on behalf of the client and charge a fee in form of a percentage of raised funds

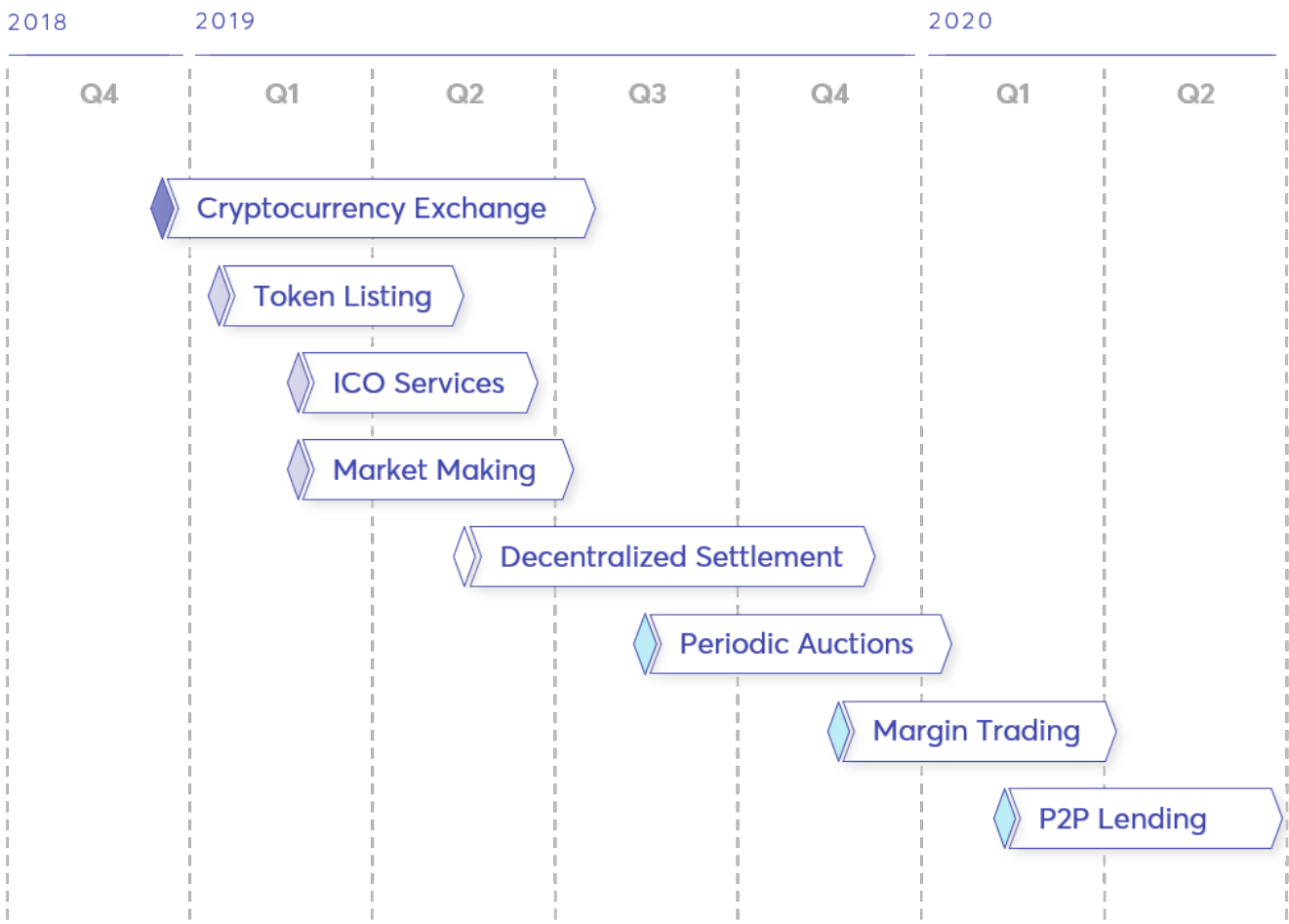
Coin / Token listing

- Blockchain.io will charge a fee to list a token applying to be traded on Blockchain.io.
- Following a successful ICO campaign supported by Blockchain.io, a token will automatically be listed on the exchange. Listing will provide liquidity to project founders and traders.
- Other tokens applying for listing will be submitted to a drastic selection process conducted by the Blockchain.io team of experts. Blockchain.io reserves the right to turn down some of the applicants.
- This listing fee will most likely be charged on a full year basis.



Blockchain.io Roadmap

Blockchain.io will progressively roll out new features over the next 18 months, starting with centralized custodial cryptocurrency exchange functionalities in 2018. ICO services and decentralized settlement will follow in early 2019.





Team



Pierre Noizat
Founder & CEO

Pierre is the CEO of Paymium, one of the first bitcoin exchanges worldwide. Pierre started working on cryptography applied to digital television services long before bitcoin appeared. He is now a recognized expert in the cryptocurrency industry. He has authored numerous books and articles about Bitcoin such as Bitcoin, Mode d'Emploi, and the Blockchain and is a much sought-after speaker at major conferences on the subject, such as the Bitcoin Conference and PayForum.

Pierre holds an MSc from Ecole Polytechnique, France's leading Engineering School, and a MBA Degree from Columbia University in New York.



Dominique Rodrigues
CTO

A highly skilled research engineer with more than 15 years of experience as a part of the French Atomic Energy commission, Dominique is a system-oriented entrepreneur who has co-founded two startups. He is an expert in cloud computing and holds two patents in distributed cloud computing and in security. Dominique is a graduate of Ecole Normale Supérieure of Cachan and holds a PhD in numerical simulation & high performance parallel computing from the École Centrale of Paris.



Pierre Tavernier

CMO

Pierre is a strategic planner with both consulting and entrepreneurial experience in the financial sector. Over the past 10 years, Pierre has worked in seven countries on the four continents of Africa, America, Asia, and Europe. Pierre holds a Master in Management in Corporate Finance and Financial Markets from EDHEC Business School.



Laetitia Zito

CFO

Laetitia is a cool-headed, no-nonsense CFO with more than 10 years of experience in finance management and control. She has worked in Canada, US, and France; and is an expert in international business management. Laetitia holds a Master in Financial Management & Controlling from ESSEC Business School.



Anthony Grouselle

Full-stack developer

Anthony is a Web & mobile developer with 10 years of experience in the US, the UK and France. His skills include algorithm development in fields such as trading and semantic analysis.



Samuel Bezerra

Mobile developer
and Product owner

Samuel recently won the Microsoft Prize for best mobile application in the education field at FuturEdu hackathon in Paris. He has studied and worked in France, Ireland, and Brazil.



Emmanuel Vaillant

Dev Ops

Emmanuel holds engineering degrees in both computer science and information technology. He has worked for AB Tasty, and has international background in Canada and France.



Paul Gaston Gouron

Full-stack developer

Paul is a Web full-stack developer and designer. A bitcoin enthusiast since 2015, Paul has developed a crypto coin of his own, Timecoins Rail, that enables time sharing. He works on machine learning algorithms in his spare time.



Guillaume Berche

Marketing & Business developer

Guillaume is a growth hacker and early-days bitcoin enthusiast. He holds a master's degree in information systems management from IESEG.



Julien Lee Kien On

Marketing & Business developer

Julien is a digital business developer with 9 years of experience in strategic marketing and digital strategy. He has worked in various industries including telecom, media, luxury, consumer electronics, and digital technology.



Advisors



Jean-Pascal Beaufret

Former General Manager of the Tax Administration – French Ministry of Finance
Advisor – Goldman Sachs

Jean-Pascal Beaufret is a former executive at the French Ministry of Finance (1977-1999) where he held various positions such as Inspection des Finances (audit service group), deputy secretary at the Treasury Department (International Affairs, Financial regulation). He is also a former Head of the Tax administration (direction générale des impôts). In the finance industry, he is a former CFO at Credit Foncier de France (1994-1996) and member of the executive board of Natixis (2008-2009). He was appointed deputy CFO then CFO of Alcatel and Alcatel-Lucent, telecom equipment maker (1999-2007) and CFO of NBN Co, Australian telecom wholesale operator, owned by the Commonwealth (2009-2012). Jean-Pascal is an advisor to Goldman Sachs in France and board member of a venture capital fund (Aurinvest Capital 3).



François Véron

Founder & Managing Partner – NewFund

François's early career included working at the Inspection of the French Ministry of Finance and at Casino, a leading French listed food retailer, where he created the Strategic Planning Department and was subsequently the Chief Executive Officer of Casino Entreprise, the corporate venture arm. François joined the Venture Capital world in 1999 and invested in CDiscount, Allociné, Direct Energie and Xilam Animation, among others. He launched Newfund, a venture capital firm focusing on early stage investments, in 2008 with Patrick Malka. François holds a Master's Degree in Finance from HEC in Paris, a Master's Degree in Political Sciences from IEP in Paris and a Master's Degree in Public Administration from ENA in Paris.



Guillaume Arnaud

Managing Director – Tikehau Investment Management

Guillaume Arnaud joined Tikehau Capital in 2007 as Managing Director of Tikehau Investment Management. Previously, he had been working at the Caisse Nationale des Caisses d'Épargne since 2000, first as a strategic business analyst and then as Head of Risk Management & Finance in the CNCE Insurance Division. Guillaume began his career in 1997 at Crédit Lyonnais in London, developing convertible bond pricing methodology. He then joined Ardent Software in Boston (USA), then the Vendôme Group in Neuchâtel (Switzerland). Guillaume holds Master's Degrees in Applied Mathematics from Ecole Polytechnique in Paris and Ecole Nationale des Ponts et Chaussées in Paris.



Xavier Faure

Partner – Spring Invest

Xavier began his career as a financial auditor at Arthur Andersen in 1993 where he specialized in acquisition engagements. In 1997, he joined Fonds Partenaires Gestion S.A., the private equity investment arm of Lazard Frères & Cie, where he was in charge of leveraged buyouts, growth capital and industry consolidation investments in middle market small and medium enterprises in the retail industry. In 1999 he co-founded Telkel in San-Francisco, a start-up operating in open source infrastructure software. Back in Paris in 2002, he joined the venture capital fund OTC Asset Management in 2002. With OTC, Xavier got involved in thirty companies including Modelabs (MDL), Ekinops (EKI), Nanobiotix (NANO) and Ymagis (MAGIS). He founded Spring Invest, a venture capital firm in 2015. Xavier holds a Master's Degree in Mathematics & Physics from Ecole Polytechnique in Paris and a Master's Degree in Philosophy from Imperial College London.



Cyril Moutran

Co-founder & CEO – Friendly

Co-founder – Feedly

Cyril is a serial entrepreneur and angel investor based in Austin, Texas. He is currently focusing on social and content applications. He is the co-founder & CEO of Friendly.io, a service delivering a beautiful Facebook experience specially designed for the iPad. Cyril co-founded Feedly, a news aggregator application for various web browsers and mobile devices running iOS and Android, also available as a cloud-based service. In March 2013, when Google announced it would be discontinuing the Reader service, Feedly grew about 15 times to 15 million users overnight. Cyril previously served as Vice President of Strategy at Vignette. Cyril holds a Master's Degree in Computer Science from Telecom ParisTech in Paris.



Stéphane Philipakis

Co-founder – Friendly
Co-founder – Twazzup

Stephane is a Los Angeles based tech entrepreneur and investor with more than 25 years of experience as software engineer and IT architect. Coder at heart, he has applied his expertise to a wide spectrum of projects, from video game startups to asset management institutions. He first got involved in Bitcoin and blockchain protocols in 2011. Stéphane holds an MSc in Artificial Intelligence and Industrial Automation from SUPELEC, followed by 2 years of post-graduate research on formal logic and proof systems at INRIA.



Frédéric Krebs

Operating Partner – NewFund

From 2000 until 2013, Frederic was involved as Chief Operating Officer in AlloCiné's success, a leading Internet brand acquired in 2007 by Tiger Global. He became Chief Marketing Officer at Cinemas Gaumont Pathé in 2015 and eventually joined 20th Century Fox, in charge of the marketing of such successes as The Revenant, Deadpool or Trolls. In 2018, he was named at the board of Singularity University - Paris Chapter. Frédéric holds a Master's Degree in Marketing from ICN in Nancy (France) and an Executive Degree in Finance from INSEAD in Paris.



Philippe Dardier

Senior Partner – Avolta Partners

Phil Dardier, a European-based Canadian, is a Senior Partner at Avolta Partners, the leading European Tech Start-up Investment Bank, where he advises European Tech firms primarily in the French and Baltic/Nordic region for fundraising (Series A, B, C as well as ICO's), cryptos and in a pure advisory capacity. Recently the CEO of Alternativa, a European MTF specializing in illiquid asset trading. He also ran European and Global equity, derivatives, Emerging market sales businesses at Merrill Lynch and at BNPParibas. He, is a co-founder of the European Crowdfunding Network. He's a longstanding Start-up investor with such firms as Vistaprint (NSDQ - CMPR), Attenda (UK), Digital Keys (Fr)... Phil was in a past life a Bobsleigh and Rugby International. Philippe holds a Master's Degree in Management & Information Systems from ESCP in Paris and a Postgraduate Degree in Defence Policy & Foreign Relations from IHEDN in Paris.



Benjamin Grange

Chief Operating Officer – Dentsu Aegis Network France

Chief Executive Officer – Dentsu Consulting

Benjamin is currently COO of Dentsu Aegis Network France and the CEO of Dentsu Consulting, the entity dedicated to C-Suite executives. For over 20 years, Benjamin has been advising top management on large scale strategic shifts and complex transformations under intense competitive pressure in the Telecom & Media and Banking industries: acquisitions, mergers, sales, fundraising, restructuring ... In November 2015, he released his 4th book dedicated to the challenges of digital transformation. Since 2014, he also manages the French ThinkTank #Culture_Numerique.

Benjamin holds an Engineering Master's Degree from Polytechnique School of Grenoble (France), a Master's Degree in business strategy from ESCP Europe and an Executive Degree from IMD Lausanne.



Julian Kaljuvee

Director – Founders Capital Ltd

Quantitative Analyst – HSBC Global Banking & Markets

Julian is a quantitative analyst with over 20 years of experience in the financial services industry. Julian spent the better part of 10 years in the US working as quantitative analyst and product manager for several major banking institutions in New York, including Goldman Sachs, JP Morgan, Merrill Lynch and Morgan Stanley, before moving to London to continue working with European financial institutions, including HSBC, the London Stock Exchange, Union Bank of Switzerland. He is above all an innovative thinker, co-founding several peer-to-peer marketplace lending platforms, building the UBS FIX client-side gateway as well as systematic trading strategies for crypto markets.



Guillaume Seligmann

Partner (Technology, Privacy, & Data Protection) – Cohen & Gresser LLP

Guillaume focuses on all aspects of technology, advising clients on a broad range of transactions, disputes, and regulatory matters, both within France and internationally. Guillaume's practice has been recognized by Legal 500 France in the IT, Telecoms, and Internet category and by Chambers Europe in the Information Technology category. He also lectures at HEC / Ecole 42 for its Masters in Management program. Guillaume received his Master's Degree in Business Law from the University of Paris I - Panthéon Sorbonne and his LL.B. with honors from King's College London at the University of London.



Muriel Goldberg-Darmon

Partner (Corporate Finance, Regulatory Compliance) – Cohen & Gresser LLP

With more than 20 years of experience, Muriel focuses on advising listed companies and their managers, investment funds, insurance companies, and financial institutions on a wide range of regulatory and compliance issues, investigations, and corporate transactions. Muriel has significant experience liaising with the French financial market Authority (AMF) and the banking Authority (ACPR), in international cooperation with foreign regulators, including the Securities and Exchange Commission (SEC). Her transactional experience spans M&A, tender offers, IPOs, and other securities issuances.

Muriel holds a Ph.D. on the legal aspects of the IPO and a Master's Degree (DEA) from the University of Paris II Panthéon-Assas in law philosophy and in business and economic law.



Partners

Newfund

Newfund

Newfund is an early-stage cross-border entrepreneurial venture capital firm which invests mainly in startups in France and the USA. Founded in 2008, the firm has raised more than € million from entrepreneurs, business leaders, family offices, and institutional investors and invested in more than 60 companies. Newfund's team is made of hands-on investors who are fully committed to the success of the companies in which they invest and support them through all their development phases.



Kima Ventures

Kima Ventures is one of the world's most active early-stage investors, investing in 2 to 3 startups per week throughout the world. Over the past 5 years, Kima Ventures has invested in over 400 startups in 24 different countries, providing founders not only with funding, but with a network and the support needed to help them reach the next steps on their journey.

Headquartered in Paris with an office in London, Kima Ventures was founded and backed by Xavier Niel, founder of Iliad and supporter of entrepreneurs through such projects as 42, Station F, and 101projets.



avoltapartners

Avolta Partners

Founded in 2012, Avolta Partners provides independent M&A and corporate finance advice to high-growth, innovative, and leading companies in Europe. With offices in Paris, London, Brussels and Lisbon, Avolta Partners advises high-growth companies at every stage of their development, from Series A to Exit. Avolta Partners already closed more than 40 high-level transactions in the High-Tech industry.

dentsu

Dentsu Consulting

Dentsu Consulting is a global strategy and communication consultancy with 5,000 employees in over 19 countries. Dentsu generates new value for people and society through the Dentsu Way of doing business across global markets, its holistic Integrated Communication Design approach, and Good Innovation – a unique blend of ideas, technology and entrepreneurship. As a part of Dentsu Aegis Network Group, Dentsu Consulting is dedicated to C-Suite executives with a strong focus on digital innovation, people and culture shift. In 2017, Dentsu Consulting helped raise €740 million for start-ups.



COHEN & GRESSER AARPI

Cohen & Gresser

Cohen & Gresser is an international law firm with offices in New York, Paris, London, Seoul, and Washington, D.C. Founded in 2002, the firm represents clients in complex litigation, investigations, and corporate transactions throughout the world. Operating through seven practice areas: Litigation and Alternative Dispute Resolution, Intellectual Property and Technology, Privacy and Data Security, White Collar Defense, Corporate, Tax, and Employment Law, the firm has been recognized in a wide range of trade publications, including Chambers, Legal 500, and Benchmark Litigation.



Paymium

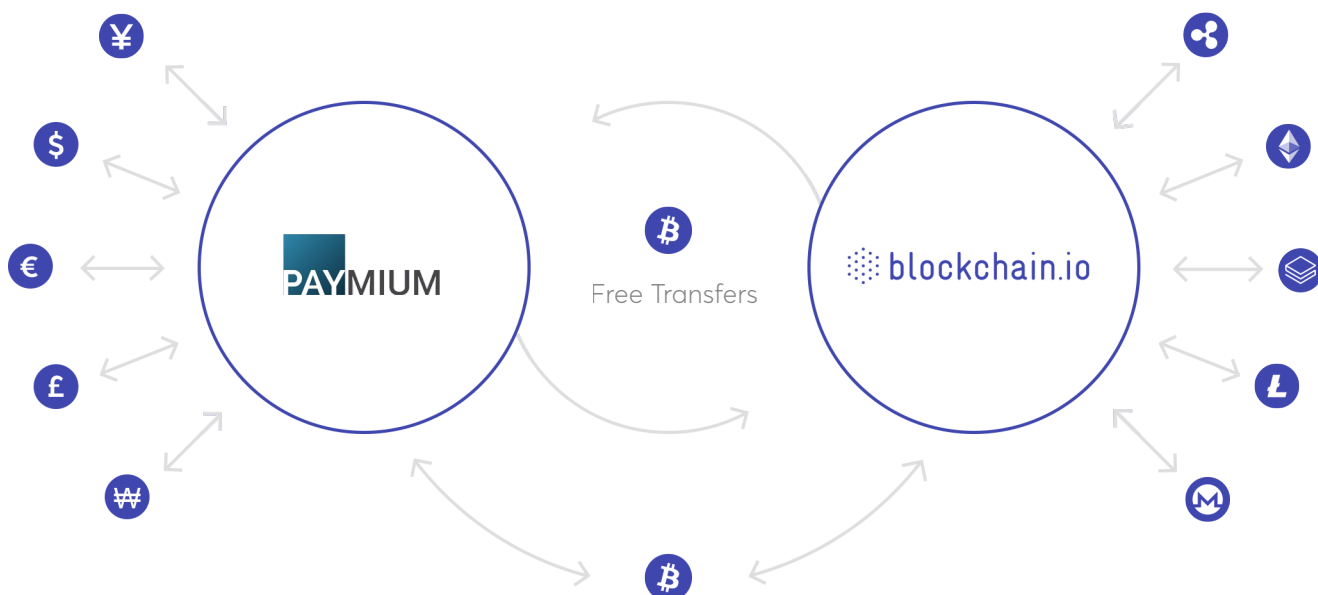
Founded by Pierre Noizat and Gonzague Grandval, Paymium is the first European platform for the purchase and exchange of bitcoins against euros, offering a service fully in accordance with European regulations and certified by external auditors. Paymium makes it possible to keep bitcoins in a fully-secured environment, swap them for euros and transfer them to other media anywhere in the world. Paymium also offers a trading interface for its most advanced users. Currently, Paymium has 170,000 registered on its marketplace.

Annexes

► Annex 1 — Relationship Between Blockchain.io & Paymium

The existing Paymium platform will provide blockchain.io users with a preferred gateway to fiat currency networks.

- Blockchain.io will be strictly a cryptocurrency exchange (no fiat money).
- Investors with fiat will have a privileged access to blockchain.io via Paymium where they may trade their fiat for bitcoins, ethers, or BCIO tokens.
- Paymium's community members may, if they so wish, become Blockchain.io community members and will be incentivized to do this.
- Paymium role as a fiat exchange is to offer Blockchain.io customers a gateway to fiat currency networks (EURO, and in the coming year USD, GBP, JPY and others).
- Blockchain.io will accept supported crypto coins/tokens deposits from all platforms and wallets (including of course the Paymium wallet).
- Blockchain.io will enable Paymium and international traders to access the cryptocurrency ecosystems and the internet of value in all forms as technology evolves.
- All transfers of coins/tokens between Paymium & Blockchain.io will be free of charge (no withdrawal fees).



FIAT Networks

Bitcoin & Altcoin Network

► Annex 2 — Glossary

Altcoin

Cryptocurrency alternatives to Bitcoin which generally use a variant (fork) of Bitcoin's original underlying code.

Atomic swaps

Atomic swaps use HTLC to ensure cross-chain trading, i.e. the exchange of one cryptocurrency to another cryptocurrency, without the need to trust a third-party or counterparty.

Coin vs token

"Coin" generally refers to cryptocurrencies fueling their own blockchain variation, such as Bitcoin, Ether, or Litecoin. Token refers to cryptocurrencies based on blockchain standards such as Ethereum's ERC-20 or Waves. Tokens are often smart contracts with wider functionalities than the sheer exchange of value.

Custodial cryptocurrency exchange

A custodial exchange/custodian exchange does not only allow users to buy and sell cryptocurrencies, it also takes custody of its users' cryptocurrency funds.

DAG

Directed Acyclic Graph cryptocurrencies are non-blockchain decentralized payment network technologies in which each new transaction confirms one or more previous transactions.

Decentralized vs Distributed

Distributed, as in distributed ledger technology (DLT) refers to the fact that many systems collaborate to the processing of an application. Decentralized means absence of a central point of control.

DDoS

Distributed Denial of Service attack.

Fair-exchange

A fair exchange protocol guarantees that if two people trade with each other, in the end either each of them obtains what he wants, or neither of them does.

Hash time-locked contracts

Hash time-locked contracts (HTLCs) ensure that the atomic swap process is trustless by requiring a cryptographic proof of payment and payment receipt prior to a deadline after which the payment is cancelled.

Off-chain vs on-chain

An off-chain transaction moves value out of the blockchain. An on-chain transaction is validated on the blockchain.

Payment channels

Payment channels aim to solve the POW blockchain scalability issues by allowing users to make a nearly unlimited number of transactions between channel participants while committing to the blockchain only the initial and final transactions.

POS, POW, POB

Proof-of-Stake, Proof-of-Work and Proof-of-Burn are examples of algorithms designed to achieve consensus in a decentralized, "trustless" blockchain network. POS chooses the transactions' (block) validator through a random selection based on something he owns (the stake). POW requires the validator to compete for solving cryptographic puzzles (mining). POB requires the validator to 'burn' some coins by sending them to a verifiable unspendable address.

Token

Cryptocurrencies representing an asset or a utility through smart contracts implemented on a blockchain such as Ether's or Waves'.

Trustless

A blockchain-based, decentralized transaction system is called "trustless" because cryptographic protocols validate transactions without the need for a trusted third-party or trusted counterparty.

- END OF THE AGREEMENT -