

LCX Is A New Kind Of Global **Financial Technology Company** - Empowering The Blockchain Industry.

Vision - Paper

October 2019

This document contains certain statements that may be deemed “forward-looking statements”. All statements that address activities, events or developments that the Company intends, expects, plans, projects, believes or anticipates will or may occur in the future are forward-looking statements. Examples of forward-looking statements include, but are not limited to, statements the Company makes regarding general economic conditions, the blockchain industry, bitcoin and cryptocurrency market, the outlook for digital asset regulation, process and intention to file for additional licenses and regulatory approvals, the potential effect of the financing on the Company’s operations, and the impact of these factors on the Company’s businesses. Forward-looking statements are based on certain assumptions and assessments made by the Company in light of its experience and perception of historical trends, current conditions and expected future developments. Actual results and the timing of events may differ materially from those contemplated by the forward-looking statements due to a number of factors, including regional, national or global political, economic, business, competitive, market and regulatory conditions. Digital assets are subject to a number of risks, including price volatility and limited liquidity. Transacting in digital assets could result in significant losses and may not be suitable for some consumers. Digital asset markets and exchanges are not regulated with the same controls or customer protections available with other forms of investing and are subject to an evolving regulatory environment.

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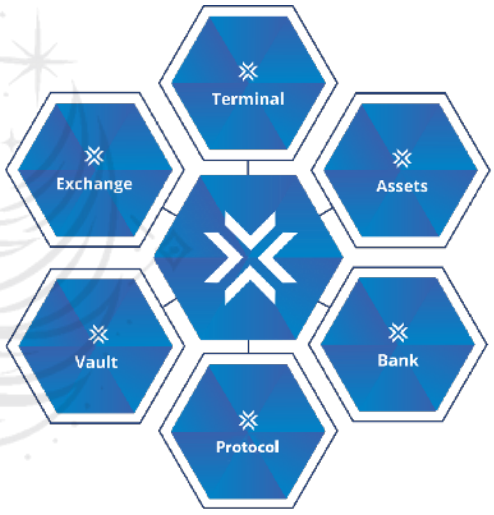
Introducing LCX - A New Kind Of Global Financial Technology Company

LCX's goal is to become one of the world's first licensed and supervised security token exchanges as a regulated marketplace for digital assets.

LCX's core elements.

- **secure** while introducing new standards for regulatory transparency and reporting
- **technology driven** while delivering a customer centric client experience
- focusing on **crypto assets** while offering the full set of **blockchain services**

LCX launched a crypto trading desk called **LCX Terminal** in June 2019. Furthermore LCX plans to launch a crypto custody services called **LCX Vault,** an exchange for security tokens and other crypto assets called **LCX Exchange,** and a variety of tokenised securities called **LCX Assets.**



LCX wants to provide the key infrastructure for the new market of digital assets and the token economy.

Becoming a technology driven finance company, LCX is focused on helping both traditional and crypto market participants make the most out of opportunities arising from the growth of cryptocurrencies and tokenized assets.

Headquartered in Vaduz, Liechtenstein, LCX has received a business trading license in November 2018[1] already and is applying to Financial Market Authority (FMA) Liechtenstein for several additional licenses. This will allow LCX to offer a comprehensive range of financial services and licensed crypto products to institutional investors and consumers.

LCX will foster the adoption of crypto by helping financial institutions and professional investors understand the potential blockchain holds to ignite global economic reform and financial inclusion.

LCX has become a member of the **World Economic Forum**'s[2] Center for the 4th Industrial Revolution, supporting initiatives with central banks and other incumbents of the financial industry. Further LCX has been name **Blockchain Pioneer**[3] by the Blockchain Research Institute.

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[1] LCX, Liechtenstein Cryptoassets Exchange, receives Business License: https://medium.com/lcx/lcx-liechtenstein-cryptoassets-exchange-receives-business-license-6bd732ea4f3f

[2] LCX joins World Economic Forum (WEF) Centre for the Fourth Industrial Revolution: https://medium.com/lcx/lcx-joins-world-economic-forum-wef-centre-for-the-fourth-industrial-revolution-26ce33542b70

[3] LCX named Blockchain Pioneer by the Blockchain Research Institute: https://medium.com/lcx/lcx-named-blockchain-pioneer-by-the-blockchain-research-institute-9e0d544ddaef

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The Age of Blockchain Technology - A New Financial Order

The collapse of Lehmann Brothers and ensuing financial crisis of 2008 unveiled the systemic risks of modern banking[4]. This modern black swan brought the fragility of the global banking network to the fore, as banks "too-big-to-fail" suddenly and violently became central points of failure and undermined the stability of global capital markets.

In the aftermath, governments justified increasingly complex regulation[5]. With interest rates close to zero, central banks deployed unusually aggressive monetary policy. However, this policy response did not address the underlying issues at the core of the crisis. From banks and clearing houses through to custodians and depositories, the modern financial system remains a series of loosely coupled siloes. Its fundamental lack of transparency means real time and aggregate auditing is difficult, allowing risk to accumulate in the cracks of the system

The search for a new financial design is inevitable.

The Internet of Knowledge

After years of computing advances, the 90s emerged as the decade of global communication infrastructure – the Internet of Knowledge – connecting the world in previously unimaginable ways. At the core of the Internet of Knowledge was the adoption of TCP/IP: the world's first global protocol for the permission-less exchange of information. With this networking technology spreading globally, the 90s presented not just a wave of opportunity for capital markets, but a complete social and economic shift. Akin to the invention of the printing press, this worldwide messaging messaging technology would dis-intermediate the flow of knowledge from governments, religions, media and print (flow of knowledge to whom?).

The Internet of Knowledge transformed the financial services industry as traditional institutions adopted digital platforms and a new "e-commerce" economy emerged. Global networks changed how banks interacted with the financial system and FinTech streamlined how users interface with banks. High speed exchanges improved market efficiency and constant information streams enhanced risk management techniques.

Despite these radical shifts, changes remained superficial. The Internet of Knowledge accelerated the process of globalisation and amplified the existing financial sector, but it did not standardise the transfer of value. As described earlier, the financial system remains a network of loosely coupled ledgers, vulnerable to systemic collapse and concealed from the scrutiny of auditors, the public and regulators alike.

The Internet of Value

The same year that Lehman Brothers collapsed, "Satoshi Nakamoto" anonymously released the Bitcoin white-paper[6], in what would be an unprecedented milestone in the move toward financial openness. The Bitcoin white-paper described a decentralised digital currency solving double spending in peer-to-peer networks. Followed by the release of the client software in January 2009, the first bitcoins were mined, with the genesis block featuring the ominous transcription:

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[4] Risk Management Lessons from the Global Banking Crisis of 2008. Senior Supervisors Group, 2009: https: //www.sec.gov/news/press/2009/report102109.pdf

[5] Overview of Progress in the Implementation of the G20 Recommendations for Strengthening Financial Stability. Financial Stability Board, 2013: http://www.fsb.org/wp-content/uploads/r_130905c.pdf.

[6] Satoshi Nakamoto. Bitcoin P2P e-cash paper. 2008: http://article.gmane.org/gmane.comp.encryption.general/12588/.

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"The Times 03/Jan/2009 Chancellor on brink of second bailout for banks."

As central banks continued to socialise the costs of the crisis with controversial monetary interventions, the Bitcoin protocol spread in the wild. With it came the promise of a non-sovereign financial order – the Internet of Value – unified by transparent, audit-able and cross-border cryptographic protocols. A decade on and to the full view of the public eye, the network has survived an onslaught of attacks and is now settling multi-million dollar transfers in close to real time.

The Internet of Value is the next generation of the Internet of knowledge. It is more about unlocking illiquid values and developing decentralized P2P networks that we can exchange these values. Blockchain, Artificial intelligence and Internet of Things will be the technologies that will bring this reality and design a truly globalized marketplace. The blockchain specifically, is the technology that will allow us to store and exchange assets in ways that were not possible before. The Internet of Value includes intangible aspects, such as our identity as a digital asset that is stored, exchanged, and whose value can be leveraged in this new connected world.

Digital Money

In a keynote speech held November 2018, Christine Lagarde, Managing Director at the International Monetary Fund (IMF), pointed out some of the key reasons why money and the financial industry is changing[7]: "A new wind is blowing, that of digitalization. And this is key: money itself is changing. We expect it to become more convenient and user-friendly, perhaps even less serious-looking.

We expect it to be integrated with social media, readily available for online and person-to-person use, including micro-payments. And of course, we expect it to be cheap and safe, protected against criminals and prying eyes. Bank deposits too are feeling pressure from new forms of money.

Think of the new specialized payment providers that offer e-money—from AliPay and WeChat in China, to PayTM in India, to M-Pesa in Kenya. These forms of money are designed with the digital economy in mind. They respond to what people demand, and what the economy requires.

Even cryptocurrencies such as Bitcoin, Ethereum, and Ripple are vying for a spot in the cashless world, constantly reinventing themselves in the hope of offering more stable value, and quicker, cheaper settlement."

Cryptocurrency: Programmable Money

Five years after Bitcoin's genesis block and its ominous transcription, this emergent financial order was augmented by a new crypto asset network: Ethereum[8]. While Bitcoin inspired the concept of a non-sovereign digital currency analogous to gold, Ethereum positioned itself as an open-source "world computer". This extended Bitcoin's promise for non manipulable money into non manipulable programmable money, introducing executable logic to crypto assets in the form of "smart contracts".

As they pertain to global finance, smart contracts expand the scope of the Internet of Value beyond transparent and immutable transactions. Transactions based on conditional logic

[7] Keynote speech "Winds of Change: The Case for New Digital Currency" by Christine Lagarde, IMF Managing Director at the Singapore Fintech Festival November 14, 2018: https://www.imf.org/en/News/Articles/2018/11/13/sp111418-winds-of-change-the-case-for-new-digital-currency.

[8] Vitalik Buterin. A Next-Generation Smart Contract and Decentralized Application Platform. 2013: https://github.com/ethereum/wiki/wiki/White-Paper.

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accommodate much of the world's financial applications. Smart contracts have the power to transparently enforce counter-party obligations through code without appealing to the legal force of financial regulation[9].

Tokenization: Programmable Liquidity

Tokens are the digital asset class native to the Internet of Value. The development of the ERC20 standard marked the first set of programming rules for these native assets. Issued and secured by the base-layer protocol, tokens leverage the immutability and transparency of the underlying crypto asset network.

Creating digital scarcity and a form of Programmable Liquidity, token issuance has the potential to transform capital markets. Initial Coin Offerings (ICOs) are the first hints at this disruption, providing public market liquidity and democratizing early stage venture capital. Total ICO funding surpassed venture capital channels in June 2017[10] and topped in the first quarter of 2018 (where total funding surpassed the total money raised in 2017[11]).

While decreasing barriers to entry for funding, the ICO has come under significant scrutiny from investors, regulators and technologists alike. ICOs have predictably attracted fraudulent ventures, hackers and social engineers[12]. A liquidity premium unheard of by traditional venture capitalists often comes at the cost of perverse incentives in the short and long term. At the same time, regulators, investor protection agencies, and governments have started to publish special guidelines and develop new laws to prevent money laundering activities and to access whether the issuance of these new crypto assets falls under the existing securities laws.

Capital markets will never be the same and tokens are a new asset class that has huge potential in changing the way Capital markets function, but also in making the Internet of Value a reality similar to the Internet of Knowledge.

Securitization: Programmable Compliance

Despite these drawbacks, ICOs demonstrated the fundamental power of tokenization as a means of unlocking vast liquidity reserves and accelerating capital formation. The first wave of tokenization introduced utility tokens, digital assets designed to power decentralized application (dApp) infrastructure. Provisioning access to services within an ecosystem, these utility tokens do not confer ownership rights and have come under intense scrutiny.

While the utility token narrative is questioned by technologists and economists alike, a new generation of infrastructure is slowly emerging: security tokens. These tokens leverage crypto asset networks to issue decentralized financial products. Just as Bitcoin and Ethereum are to traditional fiat currencies, security tokens are to stocks, bonds and derivatives. Unlike the previous wave of utility tokens, security tokens confer tangible rights to owners - equity, dividends or voting - bridging the divide between the Internet of Value and the real world. Therein lies their potential: the ability to integrate the liquidity, transparency and global availability of digital assets with time-tested financial instruments.

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[9] Nick Szabo. Smart Contracts: Building Blocks for Digital Markets. 1996: http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart_contracts_2.html.

[10] Arjun Kharpal. Initial coin offerings have raised 1.2 billion and now surpass early stage VC funding. 2017: https://www.cnbc.com/2017/08/09/initial-coin-offerings-surpass-early-stage-venture-capital-funding.html.

[11] David Floyd. 6.3 Billion: 2018 ICO Funding Has Passed 2017's Total. 2018: https://www.coindesk.com/6-3-billion-2018-ico-funding-already-outpaced-2017/.

[12] Sherwin Dowlat. Cryptoasset Market Coverage Initiation: Network Creation. Satis Group, 2018: https://research.bloomberg.com/pub/res/d28giW28tf6G7T_Wr77aU0gDgFQ.

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Up to now, we have witnessed the emergence of utility tokens, payment tokens and security tokens, despite the fact, that this categorization varies considerably by jurisdiction, there are basic elements of tokens that are mutually understood from both issuers and investors. A utility token is used in a closed ecosystem and provides access to services within it. It can be thought of, as a token to pay-as-you-go. Such tokens have existed in the world of online games for in-app purchases for a very long time, or for subscription services in a software as a service network. A security token is a digital asset that may entail various rights - for example, rights to receive dividends or interest from a company depending on their earnings, or rights to vote, or ownership rights etc. In addition, since the protocol layer of the Internet of Value is currently being built and therefore, it is a work in progress, there is naturally more issuance of pure utility tokens to power these protocol layer networks. However, the great potential going forward lies in the broad category of security tokens that can power up the Internet of Value.

Resembling existing ERC20 contracts, security tokens regulate compliance at the protocol level. They complement the Programmable Liquidity of the ICO with Programmable Compliance. By integrating KYC / AML and regulatory checks directly into smart contract logic, securities can freely trade across jurisdictions without risk of non-compliance.

From exchange to clearing house to depository, token level enforcement streamlines the structure of capital markets, facilitating globally compliant security trading against non-sovereign digital currencies like Bitcoin and Ethereum. Facilitated by global distributed ledgers, the new structure of capital markets breaks down the silos of the existing financial system, introducing transparency by default, not as a retrospective after thought.

Indeed, the scope of assets vulnerable to tokenization is unbounded. Liquid instruments like public equity, bonds and commodities stand to gain access to the world's capital markets. However, the greatest opportunity lies in illiquid assets. With long holding times and significant barriers to ownership, tokenization frees idle capital and accelerates price discovery. Commercial and residential real estate, early stage private equity and art collectibles stand to benefit from the race to tokenize the world.

Above all, the emergence of security tokens represents the maturation of the Internet of Value. The reality of the Internet of Value will be ubiquitous, much like the Internet of Knowledge is today. The tokenization of all assets will accelerate capital formation and signal the first steps to a transparent global financial system, whose networks are not siloed, but transparent, open and secure.

Blockchain Banking: Programmable Finance

The financial sector is one of the key areas where cryptocurrencies and blockchain technology has already shown its strongest impact. Crypto and blockchain companies are raising millions of funding and generating profits struggle opening bank accounts. Investors who want go in and out and invest in the new asset class of crypto asset are struggling to find way to exchange to fiat currencies - a banking bottleneck. At the famous crypto valley in Switzerland, Banks are unwilling to offer accounts to many blockchain companies: "Banks are currently hesitant to open business accounts for companies with particular touch-points to ICOs and cryptocurrencies due to risks such as fraud or money laundering"[13].

The change in how people conduct global monetary transactions through cryptos cannot be ignored. Be it simple user-to-user money transfer, payment for goods and services or

[13] BANKING BOTTLENECK - Pressure builds on banks to offer Swiss crypto start-ups accounts: https://www.swissinfo.ch/eng/business/banking-bottleneck-_pressure-builds-on-banks-to-offer-swiss-crypto-start-ups-accounts/44230922.

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crowdsource project funding through ICOs, blockchain is rapidly being integrated into our day-to-day financial interactions.

Blockchain banking will enable banks to process payments more quickly and more accurately while reducing transaction processing costs and the requirement for exceptions.

Blockchain banking is an important in restructuring the wider scale of the financial industry. It comes as an improvement of traditional banking systems. Offer services similar to those of traditional banks by blending the benefits of the crypto industry with fiat banking. As real-time, open-source and trusted platforms that securely transmit data and value, they can help banks not only reduce the cost of processing payments, but also create new products and services that can generate important new revenue streams[14]. Creating more transparent, secure, trustworthy infrastructure which is at the same time less bureaucratic, more efficient and faster.

The New Financial Order

The transformation of capital markets is an essential element of the fourth industrial revolution[15] which is powered by technology but is fundamentally different in its cross-disciplinary nature, in fusing physical, digital and biological worlds. The Internet of Value will become our new reality that is ubiquitous much like the internet of knowledge is today. In this future world that is operated on the Internet of Value, we will have tokenized physical and intangible values and these crypto assets will be exchanged, managed, and used in seamless, nearly frictionless ways, like messaging, mailing, and app services are used today.

Regulatory issues and the lack of the appropriate infrastructure to accommodate the Internet of Value, which goes hand in hand with the next generation of capital markets, are the main reasons that we have not yet witnessed the explosion of tokenized crypto assets and the establishing of blockchain banking services.

Crypto assets present the possibility of a financial system built on public audit ability and unprecedented liquidity. However, crypto assets are not palatable to most existing financial institutions. Traditional investors are largely sidelined from the asset class. For typically risk-averse incumbents from the hedge fund, private equity, pension fund, endowment or HNW ecosystem, an asset class' palatability is not simply its underlying promise. Equally important is the safety, familiarity and sophistication of the infrastructure that guides exposure and facilitates trading, custody, compliance, settlement, transfer and security over assets.

There is not yet a palatable bridge between the old and new financial systems.

Security tokens and other crypto assets

The current market of crypto assets is composed of tokens without any smart contract (i.e., cryptocurrencies) and tokens with a smart contract. This market has grown over the past year to roughly half a trillion dollars, which is still small compared to other asset classes. However, as the regulators classify existing cryptocurrencies and tokens, the market continues to grow.

Attention attracted by this new asset class is due to the spectacular growth in the number of tokens and partly due to the triple digit performance in several cases. The token based

[14] Accenture - The Future Of Blockchain Banking: https://www.accenture.com/hk-en/insight-blockchain-technology-how-banks-building-real-time

[15] The World Economic Forum - The Fourth Industrial Revolution: https://www.weforum.org/about/the-fourth-industrial-revolution-by-klaus-schwab.

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economy is now discussed officially as a disruptive force in funding early stage innovation, but with more potential use cases in the future. The only unanswered question about the upcoming broad disruption in capital markets, is “when” and “how," and not “if”.

Security tokens will be leading this disruption. We foresee that the tokenization of all sorts of existing assets - fiat currencies, public and private equities, loans, bonds, real estate, commodities, derivatives - is the natural first wave. Digital tokens that are backed by conventional assets will be part of the next generation of capital markets. The issuance of crypto assets and the ability to exchange them with any other digital asset 24/7 with considerably less frictions will be the standard in the redesigned capital markets. The main elements of the redesigned capital markets for crypto assets will be:

- Open 24/7
- Automated compliance
- Fractional ownership of crypto assets
- Reduced issuance, trading, and post-issuance costs
- Rapid settlement of trades
- Increased liquidity and market depth
- Asset interoperability
- Transparency and cryptographic privacy

The conventional private securities sector has been growing rapidly globally over the past couple of years, as IPOs have stalled due to regulatory hurdles and issuance costs, and as investors have continued to search for meaningful investment opportunities in a prolonged low interest rate environment. However, secondary trading of private securities often involves middlemen and liquidity for sizable positions is problematic. Information asymmetries, regulatory risks, and cross-border frictions, in these private markets hurt both issuers and investors and create additional impediments in the secondary private markets which are in the trillions of dollars.

By tokenizing private securities the market will be dematerialize unlocking trillions of dollars, a value that is currently blocked to serve and support the inefficiencies and risks of the current Capital markets structure. Counter-party risks will be mitigated, costs will be substantially reduced, and security will be increased through transparency. This trend has already been offer by Liechtenstein based SwarmFund[16], which offers token holders the right to invest in privately-owned tech companies like Coinbase, Robinhood, Ripple, and Didi.

The global securities lending market has surpassed $2 trillion[17] in 2017. Banks are putting the concept of securities lending on the blockchain. ING and Credit Suisse have executed the first live securities lending transaction back in March 2018[18]. The two established banks swapped baskets of Dutch and German government securities worth 25 million euros. Typically in securities lending, they are moved from one account to another. With blockchain banking the digital collateral records are used to transfer ownership of baskets of securities, without having to move the underlying securities from one custodian to another. Market

[16] Swarm Fund: https://www.swarm.fund/

[17] Securities lending market rising amid global market growth: https://www.pionline.com/article/20170314/ONLINE/170319956/securities-lending-market-rising-amid-global-market-growth.

[18] ING, Credit Suisse break new ground in test of distributed ledger technology: https://www.americanbanker.com/news/ing-credit-suisse-break-new-ground-in-test-of-distributed-ledger-r3.

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participants can redistribute liquidity more effectively and more cost-efficiently and at the same time enhance regulatory transparency of collateral chains, and mitigate systemic risk by enabling orderly default unwinds.

The global real estate market, a traditional asset class that has been growing due to demographics, urbanization trends, and growth in emerging markets, has an estimated of $217 trillion USD. This includes residential property, offices, retail spaces, hotels, and all sorts of commercial uses. There are several conventional structures that offer different exposures to the real estate sector - REITs, funds, ETFs - beyond any direct investment possibilities. However, the largest part of real estate is value that is “locked” and cannot be realized. Even in advanced markets like the US, the only way to realize part of the locked-up value for a homeowner is through a mortgage which increases debt and adds risks. There are already several real estate tokenization ventures that are focused on unlocking value and bringing all elements of the redesigned Capital markets to all stakeholders of real estate.

The global commodities markets are another large assets class that has several inefficiencies especially, related to provenance and authenticity. The tokenization of commodities, has been one of the earlier asset backed token ventures. Gold backed tokens and diamonds as an alternative investment class, are two of the examples.

The market capitalization of global public stock markets is equal to $73 trillion USD. Some argue that there is no reason to tokenize publicly traded securities. Obviously, the impact of tokenizing private financial securities and OTC off balance sheet structures like swaps and options, is greater. However, the tokenization of publicly listed securities will happen starting from the smaller capitalization securities and from companies that are global in their businesses and or want to expand globally.

Transforming Banking As We Know It

New financial technology is opening up previously unserviceable markets and is raising costumer expectations. Customers, private and corporate clients alike, want tailored products, great user experiences and simple fast fully-digital services. But most banks and their banking technology is just not well suited for this world. Banks and financial institutions simply aren’t able to build, launch and change products fast enough. This makes it difficult for banks and other incumbants to transform, compete and differentiate in rapidly changing market.

Barriers To Institutional Adoption

It is relatively straightforward to justify institutional exposure when looking to the underlying value of the asset class. One recent study justified exposure by looking to standard portfolio optimization tools, defining an optimal Bitcoin allocation of 1.3%[19]. Another Thomson Reuters survey highlighted the fact that over one in five institutional players were interested in crypto asset exposure[20]. However, it is much harder to justify involvement pragmatically: decision makers must leap into a fragmented, legally undefined and underdeveloped market. The existing market structure lacks this infrastructure and is devoid of some of the basic yet fundamental requisites of traditional asset management.

- The infrastructure supporting the bridge between traditional financial markets and the Internet of Value remains woefully underdeveloped:

[19] Jim Liew and Levar Hewlett. The Case for Bitcoin for Institutional Investors: Bubble Investing or Fundamentally Sound? Johns Hopkins Carey Business School, 2017: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3082808

[20] Tommy Wilkes. One in five financial institutions consider cryptocurrency trading, survey says. 2018: https://www.reuters.com/article/us-crypto-currencies-survey/one-in-five-financial-institutions-consider-cryptocurrency-trading-survey-says-idUSKBN1HV0S4

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- Third party custody solutions mimicking traditional asset depositories and custodian banks are nascent, lacking the flexibility required by institutional investors
- Fiat onramps with adequate liquidity are limited to few regulated platforms and the bulk of crypto asset trading volume is fragmented across unregulated exchanges
- Deep counter-party risk among exchanges and first generation stablecoin providers like Tether[21]
- Regulatory uncertainty both in regular crypto assets and security tokens that deters traditional investors with large compliance overheads.

Crypto Assets - Lack Of Custodian Solutions

For capital markets to function, secure custody is a prerequisite. Ownership of financial instruments necessitates holders – entities responsible for accepting the operational risks associated with asset management. Owners and holders are not one in the same, manifesting in the custodian bank. Custodian banks are specialized institutions solely responsible for safeguarding client assets. Strictly avoiding traditional and investment banking services, custodian banks are shielded from systemic risk and maintain 100% full reserve. As of May 2018, assets under custody of the USA's four largest custodian banks amount to over $114 trillion USD[22].

The holding concerns of crypto assets introduce complexity above and beyond traditional finance. The central securities depository (CSD) – often provided by a custodian bank – is a central location for depositing financial instruments including stocks and bonds. Certificates safeguarded by the CSD are protected from the risk of destruction, theft or loss. However, loss is not doom and gloom, as certificates can always be reissued by appropriate counter-parties. This is not the case for crypto assets, where the counter-party is a decentralized, immutable global ledger without a customer support desk or head office.

Crypto assets are unique as one of the few assets – like physical gold – where ownership entails no counter-party risk. Crypto asset networks allow for decentralized accounts enabled by public key cryptography, where ownership is direct knowledge and control of the private key that "unlocks" the public account. Loss of private keys sentence digital assets to a life in purgatory. For institutions, private key management represents a significant operational risk.

While early adopters and cypherpunks herald the freedom of "being your own bank", the responsibility of stewarding large volumes of financial assets that do not have established custodial methodologies deters institutional incumbents. Moreover, a key part of custody is the trust and reputation of the custodian. While crypto assets allow for trust-less economic relationships, the entrance of institutional capital will ultimately require trusted custodians. Without institutional-grade trust, the old and new financial systems remain divided.

Existing Exchange Landscape

The existing exchange landscape is a legally ambiguous and fragmented ecosystem. A nascent market with diverse security and operational standards, crypto asset exchanges are retail-centric and lack the key requisites for institutional on-boarding. Not only do these exchanges have thin order books – a more general problem of crypto asset liquidity – they often lack jurisdictional clarity. While institutional trading desks are facilitated by familiar

[21] Tether Stablecoin https://tether.to

[22] Largest Custody Banks Overcome Industry Headwinds To See Further Growth. 2018: https://www.forbes.com/sites/greatspeculations/2018/05/18/largest-custody-banks-overcome-industry-headwinds-to-see-further-growth/#136b3094363b

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secondary markets with trusted reputations, crypto asset exchanges are burdened by a large degree of uncertainty and counter-party risk.

There are over 200 cryptocurrency exchanges listed on CoinMarketCap[23] as of June 2018, and Bitcoin.com reports over 500 exchanges and brokerages[24]. The majority of trading concentrates among the top 20 exchanges, some denominated in digital currencies Bitcoin and Ethereum (where there is no fiat onramp) and others anchored to sovereign currencies like USD or KRW.

It is challenging to evaluate the regulatory status of the exchange landscape. In many cases, these platforms are in effect extra-jurisdictional. With steep compliance and fiduciary requirements, this dramatically limits the extent of institutional on-boarding that is possible. Moreover, exchanges operate as de facto custodians, as traders often keep a portion of their holdings in exchange wallets. Not only do prominent exchanges lack the status and recognition as custodians, the extensive history of security breaches casts a shadow on their operational security practices. The perceived unreliability of these exchanges is not surprising when considering the frequent reports of wash trading, fraudulent volumes[25] and conflicts of interest[26].

Despite this uncertain landscape, the growth potential in the crypto asset trading market is indisputable. On the “demand side”, existing exchanges lack institutional-grade services and are focused almost entirely on retail clients. On the “supply side”, the growth of trade-able tokens is virtually unbounded, resembling a Cambrian explosion. Now reportedly handling over 18% of trading volume, Binance’s rise to retail dominance over the past year captures the enormity of crypto asset trading, even in the absence of any security tokens.

As the industry matures into the next wave of incumbents, a similar growth dynamic is entirely possible, with a pivot towards institutionalization. Circle’s acquisition of Poloniex and focus on registering the exchange as an Alternative Trading System (ATS) is a steep reminder of the contrast between existing retail-centric platforms and compliant, institutional exchanges. While the former operates in a landscape that is legally undefined, the latter must focus on slowly putting together an offering which meets the regulatory, compliance and custodial standards of traditional investors.

Stablecoins - Digital Safe Havens

For investors and traders in traditional markets, safe harbor assets are critical for portfolio management. As the most liquid asset class with a valuation close to 8 trillion USD, sovereign currency serves as the primary medium for portfolio rebalancing and risk management. This is at odds with highly volatile and illiquid crypto assets. With immense variance in valuations, price stable digital assets pegged to sovereign currencies are necessary for institutional adoption.

Tokens that are backed partially or fully with some conventional currency or a basket of currencies are already issued and growing. These have been coined as “stable coins”, as they are backed by conventional relatively stable assets like fiat currencies. The majority of today’s implementations carry risk untenable to institutional investors. The largest with a valuation of

[23] Coinmarketcap (CMC): www.coinmarketcap.com

[24] Kai Sedgwick. The Number of Cryptocurrency Exchanges Has Exploded. 2018: https://news.bitcoin.com/the-number-of-cryptocurrency-exchanges-has-exploded

[25] Sylvain Ribes. *Chasing fake volume: a crypto-plague.* 2018: https://medium.com/@sylvainartplayribes/chasing-fake-volume-a-crypto-plague-ea1a3c1e0b5e

[26] Leigh Cuen. A Tangled Web: Will Coinbase Ventures Lead to Conflicts of Interest? 2018: https://www.coindesk.com/coinbase-ventures-conflicts-of-interest

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over 2 billion USD – Tether – is the markets most liquid option. As a purportedly fully reserved token, Tether trades on the expectation that all issued tokens are backed 1 to 1 by USD. To date, Tether's banking relationships are unclear[27] and official verification audits proving full-reserve status are not publicly available[28]. This presents significant counter-party and extra-jurisdictional risk, deterring potential incumbents from exposure to an asset more risky than previously considered.

As Tether dominates the stablecoin landscape, new implementations attempt to eliminate counter-party risk by embedding monetary theory directly into the cryptographic protocol. Tether can be seen as the first category of stablecoins aimed to provide a digital currency relying on blockchain without "volatile price swings".[29]

The second category of stablecoins are algorithmic based solely while other combine their approach by adding non-fiat collateralized mechanisms to maintain their peg against a fiat currency. Basis[30] and Havven[31] construct autonomous "central banks" to manipulate the currency supply and maintain a peg. However, algorithmic stablecoins are unlikely to attract any institutional capital unless they demonstrate resilience in the face of extreme market conditions and achieve widespread adoption.

The third category of stablecoins are fiat-collatorized tokens, 1-1 backed by a fiat currency like US dollar or Euro, aiming to increase transparency and security. Current market participants in this category are TueUSD[32], EURs[33] by Stasis Foundation, USDc[34] by Circle and others. These stabelcoins release detailed audits to show the backing by fiat bank accounts and other key metrics.

Fiat-collateralized stablecoins have the benefit of serving as fiat on/off ramps, offer stable prices pegged to a fiat currency and are intuitive to apprehend. The break in the peg of some algorithmic stablecoins has made it difficult for institutional investors to consider these assets as low-risk as fiat-pegged stablecoins.

In February 2019 J.P. Morgan announced a digital coin for payments. J.P. Morgan became the first U.S. bank to create and successfully test a digital coin representing a fiat currency. The JPM Coin is based on blockchain-based technology enabling the instantaneous transfer of payments between institutional accounts[35]. The JPM Coin is a defining a fourth category of stablecoins that targets a particular market segment: financial institutions and banks. JPM Coin will be backed by fiat reserves from J.P. Morgan client accounts, and will likely initially be limited with US dollars but could theoretically be expanded to any currency on their balance sheet[36].

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[27] BitMEX Research. Tether: New financial data released by Puerto Rico. 2018: https://blog.bitmex.com/tether-addendum-new-financial-data-released-from-puerto-rico

[28] Matthew Leising. Tether Hired Former FBI Director's Law Firm to Vet Finances. 2018: https://www.bloomberg.com/news/articles/2018-06-20/tether-hired-former-fbi-director-s-law-firm-to-vet-finances

[29] Tether Whitepaper 2014: https://tether.to/wp-content/uploads/2016/06/TetherWhitePaper.pdf

[30] Basis Website: https://www.basis.io

[31] Havven Website: https://havven.io

[32] The Trust Token Website: https://www.trusttoken.com/trueusd/

[33] Stasis Foundation EURs: https://stasis.net/

[34] USDc By Circle: https://www.circle.com/en/usdc

[35] J.P. Morgan Creates Digital Coin for Payments; https://www.jpmorgan.com/global/news/digital-coin-payments

[36] JPM Coin Analysis by Binance Research: https://info.binance.com/en/research/marketresearch/jpmcoin.html

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Stablecoins provide the basic infrastructure for the age of blockchain technology, enabling global decentralized digital currencies and empowering blockchain banking to a new degree.

Lack Of Regulation

Plagued by the curse of regulatory uncertainty, the explosive thrust of crypto assets to the forefront of financial innovation has left governments lagging behind. The emergence of networks governed by mathematical consensus has had the peculiar outcome of enabling digital scarcity. As decentralized virtual goods proliferate, regulators across the world scramble to understand their nature and the applicability of existing legal frameworks. The classification of crypto assets is not straightforward and hints to the emergence of an entirely new asset class, with ill-defined boundaries between security, commodity and currency.

Predictably, the difficulty of classifying crypto assets has resulted in standstill across most of the Western world and highlights the need for regulatory guidance. Governments stand in a tough position, walking the tightrope of balancing clear policies with innovation and technological advancement. Too lax and frauds go unpunished; too constrained and innovation is hampered, fueling brain-drain and jurisdictional arbitrage.

The unfortunate side-effect of regulatory uncertainty is the hindrance of institutional operators in the crypto asset space. Traditional finance abhors a vacuum, and a lack of regulation is unequivocally worse than restrictive legislation. In the latter case, the framework is clear and boundaries defined, limiting the possibility of regulatory blow back. In the former, decisions must be made on subjective interpretations of existing law, which, if incorrect, open the possibility for untested downside risk.

Without a consistent legal framework providing institutional clients a handbook for compliance, it will be difficult for these institutional investors to fully embrace the emerging asset class.

Institutional-Grade Demand For Crypto Assets

Several recent reports highlight the significant interest beyond retail investors in the emerging digital asset class. Research Tabb Group also reported in May that 2018 is the year that “digital currencies "go institutional", but they are currently being held back by perceived trading risks” even though they consider the cryptocurrency market, an opportunity for exceptional revenue and alpha[37].

Pension funds, sovereign wealth funds, asset managers, hedge funds, and other large asset owners, account for over 130 trillion USD, and according to a recent academic study[38] they are under-allocated to Bitcoin. The study presents controversial evidence using standard portfolio optimization tools, calculating the optimal allocation to BTC to be 1.3% which translates into a 1.7 trillion USD opportunity only for BTC.

Currently institutional investors, hedge funds, family offices, and HNW investors can gain indirect exposure to very few crypto assets either by trading the BTC futures on the CME and CBOE, or through Exchange Traded Notes (ETNs) such as the Swedish Bitcoin Tracker (COINXBT:SS) and the Bitcoin Investment Trust (GBTC[39]) for US investors, or structures such as the Swissquote Bitcoin Certificates, or Leonteq’s Ether and Litecoin trackers. Listed

[37] Cryptocurrency market starting to attract institutional investors: https://www.institutionalassetmanager.co.uk/2018/05/17/264330/cryptocurrency-market-starting-attract-institutional-investors

[38] The Case for Bitcoin for Institutional Investors: Bubble Investing or Fundamentally Sound?: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3082808

[39] CNBC: https://www.cnbc.com/quotes/?symbol=GBTC

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special purpose vehicles (SPV), are also a different alternative, with some offering crypto mining farm exposure, such as Canadian Hive Technologies (HIVE:V), or listed investment structures like the Canadian Global Blockchain Technologies (BLOC/;CN).

However, all of these investment vehicles are derivative structures that entail additional risks, additional costs, and are often overpriced. For example, the CME Bitcoin futures volume is relatively low - it has ranged from 5 contracts a day (unit size is 5BTC) to 4,000 contracts recently, while having peaked at 8,800 in late April - and liquidity is not stable. These futures are cash settled in USD and only Goldman Sachs and Morgan Stanley have accepted to clear these trades. The Bitcoin Investment Trust with $1.26 billion assets under management (AUM), is trading at a huge premium of close to 67%.

The problem is that most of these vehicles offer indirect exposure and only cater to a dedicated niche within the institutional world. While institutional-grade demand continues to grow, the infrastructure for mass, industry-wide exposure remains underdeveloped. There are other notable infrastructure pieces currently being built, including Bakkt's[40] physically-settled Bitcoin futures, but most existing instruments are derivative structures entailing both additional risk and cost.

Interest from large and regular capital flows into the emerging digital asset class, is growing despite the volatility in cryptocurrencies (currently, the largest kind of digital asset class). Once the security challenges for storing these crypto assets are addressed, along with a fully regulated service to exchange fiat into any digital asset and vice versa, the main impediments holding back such capital will disappear.

According to Goldman Sachs[41], the current cryptocurrency market structure is very fragmented with customers taking counter-party risk against the trading venues, which are frequently unregulated and pure crypto, and thus unable to interact with any professional entity that requires financial and tax reporting, custody arrangements, and high quality data.

Custody, compliance, security, reliable data, stability, client service and liquidity remain critical roadblocks for institutional incumbents. Until such time as these underlying pain points are served by a new ecosystem from within, cohesively, it is hard to see this institutional-grade demand evolve into large-scale exposure. An institutional-grade offering is at its core not just a product or regulatory and compliance suite, but a bridge between the old and new financial systems.

[40] Bakkt Corporate Website: https://www.bakkt.com

[41] Business Inside "Goldman Sachs: This is the main barrier stopping institutional investment in cryptocurrency": https://www.businessinsider.com.au/bitcoin-cryptocurrency-goldman-barrier-institutional-investors-2018-2

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The Principally of Liechtenstein - A Crypto Nation?

Liechtenstein is the 6th smallest country in the world, landlocked between Switzerland, Austria and Germany in the heart of Europe. Liechtenstein is known for its strong financial industry with global impact and more recently for becoming one of the most prominent hubs for blockchain - truly a Crypto Nation. LCX has strategically chosen Liechtenstein as its headquarter and jurisdiction. In light of its regulatory clarity and openness, Liechtenstein will serve as the compliant, institutional gateway to the Internet of Value and a catalyst for the new financial order.

Liechtenstein's Prime Minister – Adrian Hasler – continues to play a pioneering role in the evolution of the crypto asset markets[42]. In an interview with Coindesk Prime Minister Hasler emphasized the importance of regulatory clarity[43]:

"There is no point in creating regulations that are excessive and lacking in practical relevance, because then the blockchain economy will simply develop outside the regulations. That surely would not be in the interest of any country. Therefore we want to propose a sensible regulatory approach by means of this law, where the role of the state in creating legal certainty and confidence comes into effect where it is needed."

Blockchain Act

The Liechtenstein government announced "The Blockchain Act" on June 21st 2018. The spirit of the bill is to embrace crypto assets and blockchain technology. The first version was unveiled with an 80+ page document detailing the intricacies of the ground-up legislative framework. Summarizing this vision for both openness and clarity, an official press release from the Liechtenstein government on the 29th of August 2018 reads[44]:

"The legal classification of elements on blockchain systems is another focus of this proposal. The Blockchain Act defines the term "token" as a new construct to enable the transformation of the "real" world to blockchain systems while ensuring legal certainty, thereby opening up the full application potential of the token economy. The introduction of the legal construct of the "token" in Liechtenstein law requires that the legal consequences such as ownership, possession, and transfer must also be legally defined."

Liechtenstein is positioning itself as the European and international leader in cryptoasset regulation, paving the way for financial institutions, accredited investors, wealth managers, family offices and high net-worth investors to embrace the asset class. Given the country's international reputation for compliance, the Blockchain Act brings certainty to the cryptoasset and blockchain industry.

Liechtenstein is a AAA rated country[45] committed to the development of the Internet of Value by accommodating blockchain innovators and cryptoasset capital formation:

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[42] John Griffin and Levar Hewlett. Liechtenstein plays a pioneering role in government regulation of the crypto-financial market. PwC, 2018: https://www.pwc.ch/en/publications/2018/crypto-liechenstein.pdf

[43] Annaliese Milano. Liechtenstein to Avoid 'Excessive' Blockchain Regulation: Prime Minister. 2018: https://www.coindesk.com/liechtenstein-to-avoid-excessive-blockchain-regulation-says-prime-minister/

[44] Liechtenstein preparing Blockchain Act. 2018: https://www.liechtenstein.li/en/news-detail/article/liechtenstein-preparing-blockchain-act

[45] Niklas Steinert and Thomas Fischinger. Liechtenstein 'AAA/A-1' Ratings Affirmed; Outlook Stable. Standard and Poor's, 2018: http://www.regierung.li/media/attachments/RatingsDirect-ResearchUpdateLiechtensteinJun-01-2018-636643303137038761.PDF?t=636707401115149506

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- The Financial Market Authority (FMA) of Liechtenstein has already approved three Alternative Investment Funds for cryptoassets this year – Incrementum Crypto One Fund, Postera Fund and Coinlab Digital Asset Fund
- The Liechtenstein Government is committed to the adoption of blockchain technology for all administrative processes
- The Crown Prince of Liechtenstein, Alois Philipp Maria von und zu Liechtenstein, has repeatedly demonstrated interest in blockchain technology as a powerful way to unlock wealth[46].

The Blockchain Act is defining the Token as a legal instrument creating the legal basis for a transformation of any possible asset into a digital asset. Furthermore the laws define key roles and setting new standards for services in the blockchain industry. The regulations are also covering elements to safeguard Tokens and private keys in case of bankruptcy of service providers, defining minimum standards for service providers and creating rules for permanent supervision of the service providers by the Regulator (FMA).

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[46] Annaliese Milano. The Crown Prince of Liechtenstein Wants to Invest in Crypto. 2018: https://www.coindesk.com/the-crown-prince-of-liechtenstein-wants-to-invest-in-crypto/

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LCX - A New Kind Of Global Financial Technology Company

LCX, the Liechtenstein Cryptoassets Exchange, is a new blockchain ecosystem.

- **secure** while introducing new standards for regulatory transparency and reporting
- **technology driven** while delivering a customer centric client experience
- focusing on **crypto assets** while offering the full set of **blockchain services**

The initial product is LCX Terminal, an advanced crypto trading desk to trade on all major crypto exchanges within a single interface. LCX is planning a compliant security token platform for issuing, storing and trading of cryptocurrencies, tokenized securities and digital assets – after necessary regulatory approval has been obtained.

Headquartered in Vaduz, Liechtenstein, LCX has received a business trading license in November 2018[47] and is applying to Financial Market Authority (FMA) for several licenses. This will allow LCX to offer a comprehensive range of financial services.

LCX will foster the adoption of crypto by helping financial institutions and professional investors understand the potential blockchain holds to ignite global economic reform and financial inclusion.

LCX's Philosophy

LCX stands for Liechtenstein Cryptoassets Exchange. LCX is building a new category leader in blockchain fostering a holistic view on digital- and traditional assets. Our ambition is to build something sustainable - not only be able show short-term successes, but also to deliver on a long-term strategy - creating strategies and visions for next 5, 10 and 50 years.

LCX is a technology company at heart and has committed to the following principles:

- **Security.** Implementing the highest security standards, processes and technologies to secure LCX's infrastructure.
- **Transparency.** Setting new standards in financial monitoring, reporting, Anti-Money-Laundry (AML) and Know-Your-Customer (KYC) regulation.
- **Value.** Creating value for our customers by focusing on their needs while creating value within the new financial industry as a whole.

LCX's company culture and company values reflect the need for a customer centric approach, the ability to adapt to market or technology changes quickly and the ambition to build something outstanding.

- **Customer Focus.** First.
- **Learn.** Be Curious.
- **Reflect.** Deliver Results.
- **Simplify.** Take Action.
- **F*ck Average.** Be Legendary.

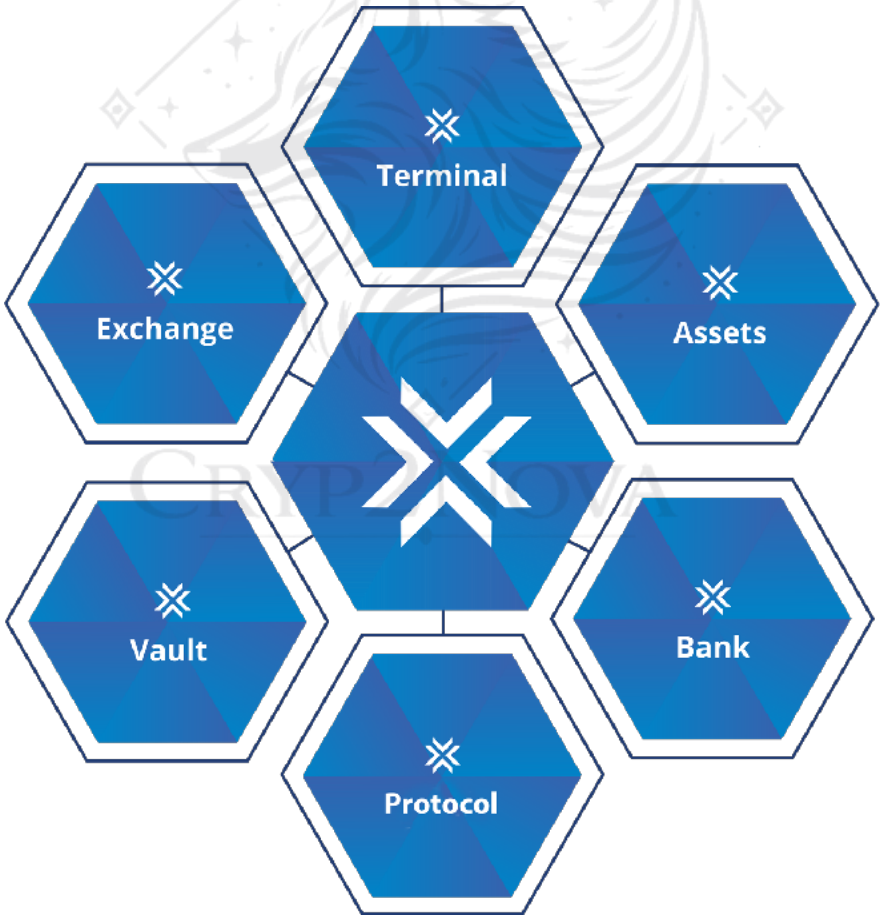
[47] LCX receives business license https://medium.com/lcx/lcx-liechtenstein-cryptoassets-exchange-receives-business-license-6bd732ea4f3f

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LCX - Products And Services

LCX is building a financial ecosystem for digital assets to become the new category leader in the blockchain industry. This can be only achieved by combining several key elements as outlined below:

- **LCX Terminal** – trading desk for managing the complete crypto asset trading lifecycle cross platform
- **LCX Exchange** – aiming to launch a regulated exchange and marketplace for crypto asset and security token trading
- **LCX Assets** – tokenization platform for a variety of tokenized digital assets
- **LCX Vault** – institutional-grade custodian solution
- **LCX Protocol** – a decentralized compliance protocol aka. “The Liechtenstein Protocol” to standardize the way security-tokens are issued and traded on blockchains.
- **LCX Bank** - part of our long-term vision is to become a “blockchain bank" and to apply for a full bank license focusing on corporate banking.



Ultimately, LCX’s suite of products, services and partnerships will introduce maturity to the industry and provide institutional clients with the strict security and compliance prerequisites they need to embrace the asset class.

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LCX Terminal

The LCX Terminal provides a digital desk for cross-platform crypto asset trading. The LCX Terminal interfaces with cryptocurrency exchanges to unify the digital asset trading experience, providing integration support for:

- Advanced Crypto Trading Desk: Trade on all major crypto exchanges within a single interface.
- Connected to 10 exchanges at the moment - additional Exchanges rolled out over time.
- Register at www.LCX.com/terminal

As a consolidated gateway, the platform introduces a suite of cross-exchange tools to simplify and enhance cryptoasset trading:

- Uniform interface – multi-exchange trading via a single, consistent interface
- Performance tracking – real time profit / loss monitoring
- Portfolio management – consolidated portfolio tracking and investment analysis
- Automated trading tools – cross-exchange arbitrage bots; custom trading bots enabled by machine learning
- Strategy marketplace – trading algorithm marketplace; portfolio matching
- Cryptoasset data feed – customisable price statistics.

The LCX Terminal integrates an advanced simulation model to facilitate backtesting of trading strategies against historical price data from existing cryptocurrency exchanges. Successfully backtested models can be monetized on the strategy marketplace.

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LCX Exchange

LCX is building a sophisticated trading platform for security tokens and other crypto assets. Powered by the Liechtenstein Protocol, LCX is designed to satisfy the strict requirements of institutional investors: custody, compliance, stability, transparency and auditability. LCX is planning to apply for several license prior to launch of LCX Exchange.

The LCX Exchange will be built on scalable infrastructure, with a high performance matching engine and a secure backend. LCX's platform will offer world-class stability and service quality tailored to the needs of professional investors. It will incorporate the LCX custody solution, analytical tools and a variety of reporting capabilities. The trading interface will be available in English and other languages like German and Chinese simplified at a later point of time. Additional languages will be rolled-out over time.

The LCX Exchange will be rolled out in several phases, first listing a variety of cryptoassets and at a later point of time listing security tokens. The listing of security tokens is in accordance with International Financial Market regulations and will be launched after final approvals.

Advanced Trading Tools

LCX's matching engine will support limit orders, market orders, stop-loss orders as well other advanced order types including one-cancels-other (OCO) orders. LCX will provide a full record of trades and performance, enabling customers to sort, analyse and visualise their data using visual and analytical tools. LCX reports will be available via CSV and an API, meeting the requirements and needs of a variety of clients, from day traders and long term investors to large financial institutions.

Portfolio Management

LCX's reporting mechanisms will integrate:

- Calculation tools – profit & loss per trades, time period, type of digital asset and volume
- Portfolio visualisation – by digital asset, market capitalization, balances, realized and unrealized profit / loss
- Automated tax – detailed logs of all transactions in order to automatically create tax documents
- Capital gains reporting – in a format prepared for accountants and tax offices
- Audit reports – for institutional customers who may request them for their own auditing needs
- Export Reporting – CSV and PDF download to all reporting data.

These advanced reporting systems will generate large amounts of user data. LCX will implement transfer encryption methodology in several data layers to ensure that all sensitive user data is stored with bank-level encryption.

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LCX Assets

LCX will offer asset management across fiat and crypto assets alike, issuing a variety of tokenized financial assets and offering security token emissions

Furthermore LCX will lead the emission of security token offerings and may issue several tokenized financial assets.

LCX has partnered with established banking and auditing partners to address the shortcomings of existing financial products. LCX is developing its own crypto asset backing method, as well as a highly secure and transparent operational process.

LCX Vault

LCX will offer custodian services of cryptocurrencies for its clients. The LCX Vault will be integrated seamless in the system, using dedicated and highly secured cold wallets in combination other technology solutions.

Furthermore LCX is partnering with the leading crypto custodian company, Ledger. LCX will be is already using a customized custodian solution and will be implementing the system for LCX's clients as well. Ledger is the market leader in secure hardware for storing crypto assets, LCX has decided to work closely with Ledger and implement their institutional-grade custodian solution.

The LCX Vault will provide clients with an end-to-end security solution and operational service, while allowing clients to maintain control of their private keys at all times.

LCX's advanced crypto wallets will be based on certified Hardware Security Module (HSM) technology. The hardware security modules will secure the private keys and manage the multi-authorization process.

"LCX Vault will protect institutional investors from the operational risks of trading digital assets, allowing, for the first time, asset managers and custodians to conveniently trade this new class of asset without compromising on security."

Eliminating the operational risks inherent to digital asset trading and storage, the LCX Vault facilitates:

- Multi-signature functionality, defined roles with customisable permissions
- Configurable access control lists for digital asset wallets
- Tailored multi-factor authentication for transactions
- Rate limiting, multi-signature and time lock controls
- Emergency recovery procedures

Access to the LCX Vault is based on strict role-based and attribute-based access control rules.

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LCX Protocol

LCX is developing a decentralized compliance protocol to standardize the way security-tokens are issued and traded on blockchains. This will be launched and developed in teamwork with a leading blockchain company or developed in-house - depending on market conditions.

The Liechtenstein Protocol, is a standard developed by LCX that defines a mechanism in which security tokens transferred in a way that it is fully compliant with legal requirements and the Liechtenstein set of laws, called the Blockchain Act.

It requires issuing a dedicated permissioned token on the blockchain that checks an on-chain LCX Regulator Service for trade approval. The LCX Regulator Service can be configured to meet relevant securities regulations, Know Your Customer (KYC) policies, Anti-Money Laundering (AML) requirements, tax laws, and more. The Liechtenstein Protocol enables security tokens to become compliant and that they can be traded across many platforms.

The “Liechtenstein Protocol” addresses the need for compliance on secondary transfers. LCX aims to transform the global securities market by empowering tokenizing of any asset, including private securities or crypto assets.

Additional Information will be published at www.LCX.com

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LCX Bank*

Part of LCX's long-term plan, LCX plans to apply for several licenses, including a banking license. The aim is to offer transaction banking for companies and individuals, with a strong focus on corporate banking. LCX is planning to expand the traditional financial services at a later point of time.

LCX will be delivering unbeatable value, flexibility and transaction speed by combining the efficiency of cryptocurrency payments with the universal acceptance of traditional fiat currency accounts, on a global scale. LCX will enable payments anytime, anywhere, in crypto or traditional currencies. Exchanging between fiat and crypto (and any combination therein) right on the main user interface.

LCX will set up multi-currency accounts for personal use or registered to a business's legal entity. LCX's hybrid approach make it possible to hold and manage crypto and fiat currency accounts on one simple banking interface.

LCX's core banking systems is a cloud-native software, supporting composable API-enabled ecosystems. This unique core banking solution will empower LCX to operate like a tech company rather than a bank.

LCX is cloud-native which makes it:

- **Agile** - implementation in weeks/months instead of years.
- **Flexible** - change products/features in days, leverage best of breed technology.
- **Scalable** - able to meet growing and changing business needs.
- **Fully digital** - API driven architecture, composable, cloud-native solution.
- **Innovative** - highly configurable so there is no need to customize, can build a modular environment and integrate external best of breed modules

*Note: LCX has not obtained a banking license and is not allowed to offer any of these services today. The description above is part of our Vision Paper and long-term strategy. LCX will announce and publish regular updates on the licensing process.

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LCX Partnerships

See full overview of the strategic partnerships at www.LCX.com/about
- this will be updated regularly.

World Economic Forum

The World Economic Forum is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

The Centre for the Fourth Industrial Revolution is a hub for global, multistakeholder cooperation to develop policy frameworks and advance collaborations that accelerate the benefits of science and technology.

LCX has become a member at the Centre for the Fourth Industrial Revolution of the World Economic Forum, and joins a select group of global companies closely aligned with the forum's commitment to improving the state of the world.

Ledger

Founded in 2014, Ledger is a leader in security and infrastructure solutions for cryptocurrencies and blockchain applications. Headquartered in Paris and San Francisco, Ledger has a team of 200 professionals developing a variety of products and services to safeguard cryptocurrency assets for individuals and companies – including the Ledger hardware wallets line already sold in 165 countries. In 2018, Ledger was named as one of the "Hottest Startups in Paris" by WIRED Magazine.

Blockchain Research Institute

The Blockchain Research Institute (BRI) is an independent, global think-tank committed to identifying the strategic opportunities for blockchain in business and government, founded by Don and Alex Tapscott, and headquartered in Toronto, Canada.

The Institute's global team of experts is dedicated to exploring, understanding, documenting and informing leaders about blockchain strategies, market opportunities, and implementation challenges.

Global Digital Finance (GDF)

GDF is an industry membership body that promotes the adoption of best practices for crypto and digital assets and digital finance technologies, through the development of conduct standards, in a shared engagement forum with market participants, policymakers and regulators.

Global Digital Finance endeavours to drive efficient, fair and transparent crypto asset markets by building a knowledge base and best practice for "Truly Digital" finance and the benefits tokens can bring all market participants. We promote an inclusive vision in which crypto assets and token markets can evolve and grow in complement within traditional financial services.

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Security Token Alliance (STA)

STA is an alliance of serious participants in the security token ecosystem, coming together to collectively solve common challenges. In order to foster a landscape where security tokens and associated infrastructure are in a mature, regulated, compliant, and credible stage, we welcome a wide range of participants, include traditional and crypto investors, regulators, lawyers, compliance officers, Ethereum developers, and enthusiasts.

Security Token Alliance is neither a registered broker-dealer nor an investment advisor in any jurisdiction. You cannot invest in any financial product or buy tokens through our site or any of our team-members. Nothing published on Security Token Alliance should be constituted as investment advice or an endorsement of any project. All investments entail risk and you should seek professional investment advice from a licensed financial advisor before making any investment.

Liquid

Founded in 2014, we are a leading global fintech company that operates Liquid.com ("Liquid"), a global cryptocurrency platform that provides trading, exchange, and next-generation financial services powered by blockchain technology. With offices in Japan, Singapore and Vietnam, Liquid combines a strong network of local partners with extensive team experience in banking and financial products to deliver the best in class financial services for its customers.

Today, Liquid is the world's largest crypto-fiat platform by transaction volume, regulated in Japan. Powered by the World book, which provides customers enhanced price matching and deeper liquidity for various fiat and cryptocurrency pairs, Liquid offers trading services for major cryptocurrencies such as Bitcoin and Ethereum against fiat currency pairs in Japanese yen, US, Singapore and Australian dollar, and Euro.

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LCX Management & Team

LCX is a tech company at core, while balancing expertise in crypto, blockchain and banking sector. All team members have been at the forefront of innovation in the industry for many years and have lead fast paced growth companies in the past.

The management has been working at tech startups, blockchain projects, quant funds, venture capital and financial organizations like Morgan Stanley, Goldman Sachs, J.P. Morgan, as well as key Liechtenstein Banks.

LCX will publish a detailed overview of the management team at www.LCX.com/about

Monty C. M. Metzger is CEO, Founder and Chairman of the Board at LCX.
He is an internet veteran and acclaimed thought leader on the future of digital.

In his role at LCX he is building A New Kind Of Global Financial Technology Company - including a next generation digital assets exchange and financial institution blending traditional assets and crypto assets.

Monty found his first Internet company back in 1998, since then he co-founded several tech companies. He co-founded a future technology consultancy with offices in Beijing, Tokyo, Munich and New York. After his exit at the company in 2008, he became a business angel and investor - managed via his family office Metzger Capital AG.

In 2014 he co-founded Digital Leaders Ventures (www.D-L-V.com) in Luxembourg where he was a General Partner. DLV is investing in fast-growing technology companies globally.

Previously, he started Digital Leaders (DigitalLeaders.co), a global network of some of the most influential leaders in the technology industry. The team at Digital Leaders are offering customized learning journeys and executive programs for CEO's, high-level managers, corporate groups and government delegations, curating agenda's at technology hubs such as Silicon Valley, Stockholm, London, Tel Aviv, Beijing, Tokyo and Crypto Valley Switzerland and Liechtenstein. Digital Leaders AG is headquartered in Switzerland.

Find out more at http://blog.monty.de or follow Monty on twitter at @montymetzger.

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LCX Advisors

LCX is working with a selected group of international acclaimed thought leaders, influential industry leaders and experienced entrepreneurs. All advisors are long-term business contacts or even friends of Monty C. M. Metzger and the management team.

The Advisors of LCX are engaging with the management team on a regular basis. LCX is holding advisory calls, one-on-one sessions on particular topics and personal closed-door advisory sessions regularly.

Don Tapscott, Leading Authority in Blockchain

Don Tapscott, CEO of The Tapscott Group, is one of the world's leading authorities on the impact of technology on business and society. He has authored 16 books, including Wikinomics: How Mass Collaboration Changes Everything, which has been translated into over 25 languages.

Don's most recent and ambitious book was co-authored with his son, startup CEO and bitcoin governance expert, Alex Tapscott. Blockchain Revolution.

Don is a member of the Order of Canada and is ranked the 2nd most influential management thinker, and the number one Digital Thinker in the world by Thinkers50. He is an Adjunct Professor at the Rotman School of Management and Chancellor of Trent University in Ontario. It is hard to imagine anyone who has been more prolific, profound, and influential in explaining today's technological revolutions and their impact on the world.

Find out more at DonTapscott.com

Jimmy Wales, Founder of Wikipedia

Internet and technology entrepreneur. Founder, online non-profit encyclopaedia Wikipedia. Co-Founder, privately owned Wikia, including its entertainment media brand, Fandom powered by Wikia. Serves on the board of trustees of the Wikimedia Foundation, the non-profit charitable organization he established to operate Wikipedia. April 2017, launched WikiTribune - a news website involving professional journalists working alongside volunteers to curate fact checked and reliable articles. Named in Time magazine's "100 Most Influential People in the World" for role in creating Wikipedia.

Prof. Dr. Shoucheng Zhang, Stanford Professor and Chairman at DHVC

Mr. Zhang is a tenured professor in the Department of Physics, Department of Applied Physics, and Department of Electrical Engineering at Stanford University. He is also an academician at the American Academy of Sciences, a foreign academician at the Chinese Academy of Sciences, a professor at the Institute for Advanced Study of Tsinghua University, and Founding Chairman of Danhua Capital (DHVC).

Because of his pioneering research on Spintronics and Topological Insulator fields, he was granted the Guggenheim Fellowship in 2007, the Humboldt Research Award in 2009, the EPS CMD Europhysics Prize in 2010, Qiu Shi Excellent Scientist Award in 2011, the Oliver E. Buckley Condensed Matter Prize by the American Physical Society in 2011 and the Dirac Prize in 2012. In 2013, he and Stephen Hawking was given the Physics Frontiers Prize. In the same year, he became a foreign academician at the Chinese Academy of Sciences. In addition, he won the Thomson Reuters Citation Laureate in 2014 and the Benjamin Franklin Medal in 2015.

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Plamen Russev, Webit Foundation

Frank Gessner is a Serial Entrepreneur with deep digital know-how and growth expertise, from start-up, scale-up to growth companies and IPO's. As a university student, Frank developed a custom webshop-software and later co-founded Intershop AG, a NASDAQ-listed e-commerce firm that had temporarily been valued more than $11 billion USD. During his 10 years at Intershop, he was responsible for global product development. After that, he found ALEA, a company offering back-office software to optimize e-Commerce.

Later he joined Delivery Hero as Chief Information Officer (CIO), responsible for the tech platform of the fast-growing company. In January 2014 he found 4scotty.com, a tech-recruiting platform to disrupt the HR and hiring process for developers and technology experts.

Besides his entrepreneurial efforts, he is an active business angel and investor, founder, and partner at TowerVenture and venture partner at Avala Capital.

More recently Frank Gessner found Invao registered in Liechtenstein. Invao is a global Blockchain Investment Management company, developing sophisticated financial products with a cross-industry approach to enable investors to participate in Blockchain's growth potential. Invao has launched its IVO Blockchain Diversified Bond, an asset-backed blockchain bond which had been approved by the Financial Market Authority Liechtenstein (FMA).

Plamen Russev, Webit Foundation

Founder and Executive Chairman of Webit.Foundation and the Global Webit Series, one of the largest global communities of digerati, enterprise leaders, investors and founders from over 100 countries. Plamen Russev is B.Sc in Marketing and Management. M.Sc in Mathematics and Informatics, e-Education. With Ph.D thesis Digital Solutions for Managing Health and Social Challenges.

He is a Serial Entrepreneur, Investor, Philanthropist. Plamen is also a member of the boards of a number international companies and NGOs. Recently he joined the Board of Directors of Endeavor Bulgaria. Plamen has been selected among the top 100 innovators of New Europe and awarded governments and NGOs.

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Yat Siu, Outblaze and Animoca Brands

Yat Siu is a technology entrepreneur and investor based in Hong Kong, Yat Siu is founder and CEO of Outblaze, a digital services and solutions company specializing in cloud, gaming, and smartphone software. A serial entrepreneur, Yat is also a founder and board director of mobile games publisher Animoca Brands, which in its first year published 200 apps and accrued over 60 million players before attracting investments from Intel Capital and IDG-Accel. Animoca Brands is a pioneer in blockchain gaming and is listed at Sydney Stock Exchange ASX.

In 1995 he moved to Hong Kong to establish Hong Kong Cybercity/Freenation, Asia's first free web page and email provider, later acquired by a US-based company. In 1998 he set up Outblaze, a multiple award-winning company that pioneered cloud-like multilingual white label web applications. In 2009, IBM purchased Outblaze's messaging division and used it to open the first IBM cloud computing lab in Asia. After the asset sale, Yat successfully pivoted Outblaze to focus primarily on digital consumer entertainment.

Yat has received the URENCO Innovation Award, the Outstanding Entrepreneur Award at the Asia Pacific Entrepreneurship Awards, the Young Entrepreneur of the Year at the DHL/SCMP

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Business Awards, and many others. In 2002, the World Economic Forum named him a Global Leader of Tomorrow.

Miko Matsumura, Thought Leader

Miko Matsumura is a crypto pioneer, founder of Evercoin and is a Venture Partner with BitBull Capital, a cryptocurrency fund-of-funds. He is a token holder in FileCoin, Brave, CIVIC, Propy, Polymath and an investor in Lyft. As chief Evangelist for the Java Language and Platform he participated in the first wave of the Internet, and is now fully engaged in Internet of value. As a 25 year operating exec in Silicon Valley, he has raised over $50 million in venture capital for Open Source startups and over $200M in ICO capital. He is also an LP with Focus Ventures, a firm with over $800M under management, 9 IPOs and 44 exits. He holds an Master's degree in Neuroscience from Yale University where he worked on abstract computational neural networks. He's leads the Crypto Underground meetup in San Francisco and is a well known speaker at many cryptocurrency and blockchain events.

David Mikkelsen Troensegaard, Social Entrepreneur

David Mikkelsen Troensegaard, along with his brother David, are social entrepreneurs and founders of Refugees United, an organization with a mission to reconnect refugee families separated during escape from conflict. Working to implement a family-locating IT infrastructure between nongovernmental organizations assisting refugees on the ground, the brothers work to provide not only a powerful tool between agencies, but to harness the skills and capacities of oft-forgotten refugees themselves, and make them part of the reconnecting process. In pursuit of its mission, Refugees United has focused on the vast wealth of knowledge to be found in the private sector, partnering with corporations such as FedEx, SAP, Ericsson and Ketchum PR, marrying the passion of the NGO with the structure and expertise of the world of business to create a high-impact, low-cost model to solve an invisible global problem.

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LCX Roadmap

In 2013 Monty C. M. Metzger published "Mapping the Bitcoin Landscape" at his blog https://blog.monty.de

At Digital Leaders Ventures Monty and his team wanted to invest in crypto assets - but at that time the regulatory framework and institutional-grade infrastructure was non-existing. The idea of LCX was born.

Now LCX aims for digital excellence as a fintech company.

International growth from day one.

Sustainable business acquisition.

2025

Billions of Assets under Management (AuM)

70% crypto assets / 30% fiat assets

EXOSPHERE

2024

Growth via Digital Excellence

Operational excellence & customer centricity
Mastering AI & Automation

THERMOSPHERE

2023

Growth via Financial Services

Expanding the LCX Digital Assets Platform

MESOSPHERE

2022

Artificial Intelligence and Big Data

Establishing scalable technology solutions based on AI and Big Data to create new standards for financial services.

STRATOSPHERE

2021

Digital Assets

Additional Services for Digital Assets
LCX Vault - establishing a secure crypto assets custodian

TROPOSPHERE

2020

Growth via Tokenization

LCX Assets - Establishing the new asset class of security tokens
LCX Exchange - Substantial Security Token Exchange Volume
Introduction of AI based tools for regulatory reporting, KYC and AML

2019 **Crypto Asset Framework: LCX Terminal** - Launched in June 2019

2018 **Incorporation of LCX AG** - Seed funding, technology development

2017 **Vision of LCX** - Initial partnerships, business planning & team building

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