TECHEMY CAPITAL

BNC. bravenewcoin.com

TECHEMY ADVISORY

MAR 2019

STO
Investment Guide

TECHEMY GROUP PROPRIETARY RESEARCH 2019

Executive Summary

Blockchain has allowed for the digitisation of value and the creation of programmable money in the form of cryptographic assets. This represents the birth of a whole new superclass of investable assets with the potential to subsume all existing asset classes. Subsequently, blockchain has transformed capital raising with the appearance of the Initial Coin Offering (ICO) fundraising model. Attracted by this success (ICOs raised more than US$20 billion in 2017-2018), institutional investors have now entered the crypto sector, driving the agenda for the tokenisation of financial instruments and capital assets. The underlying economic incentive of this new asset class coupled with pressure from financial regulators has resulted in the evolution of capital formation and the advent of Security Token Offerings (STOs).

The STO market is projected to reach US$5 trillion by 2022 (if less than 1% of globally traded assets move onto blockchains), representing an enormous opportunity for capital markets. In the longer run, over the next two decades security tokens are set to disrupt the global securities market, currently valued at US$500T+. This investment guide sheds light upon the emerging market for the digitisation of financial securities, and identifies potential ways to exploit this opportunity. This guide outlines how value flows between STO issuers and investors, how STOs can be structured, issued, and custodised, and a top-level overview of the STO ecosystem and its players.

Due to their programmable nature, security tokens are more efficient and scalable than existing asset classes, with major benefits coming from cost savings, transparency, and access to a wider pool of international investors. In time, security tokens will be regulated and compliant cross-jurisdictionally, although regulation is currently a pain-point that all key geographies are trying to address. Security tokens can be programmed to bear any types of legal rights as traditional financial instruments, including fractional ownership, governance rights, rights for revenue share, and so on. Classification of STOs will largely mirror the traditional financial markets. The top-level categories will include: *tokenised assets* (e.g. real estate, commodities, art), *tokenised equity & revenue*s (e.g. stocks, cash-flows with limited equity rights), and *tokenised debt* (e.g. convertible bonds, peer to peer lending).

As the STO ecosystem is being established, it is creating a dynamic global value pool for new and existing financial markets service providers to participate in. Navigating this market will prove challenging for at least 5 years as the necessary frameworks, standards, and best practice form. The biggest opportunity will lie with those entities looking to create and leverage STOs working with parties that have a pedigree in the crypto market with support from traditional market expertise (e.g structuring, consulting).

SECURITY TOKEN OFFERINGS

STO INVESTMENT GUIDE

A New Superclass of Assets is Born

Techemy Group's vision is based on the thesis that cryptographic assets and distributed ledgers are the new superclass of assets that underpin the emerging era of the Internet of Value.

Enabled by blockchain technology, crypto assets allow both businesses and individuals to digitally capture, democratise, securely transfer, and rightfully own the value they possess, whether it is personal data, real estate, company shares, fine art, gold, or goodwill.

The value capture occurs by the way of tokenisation - any real world asset can be represented in the form of a digital cryptographic token and securely stored on blockchain's distributed ledger.

		Capital Assets Provide ongoing source of value, and can be priced on the basis of the net present value of its expected returns.	Consumable/ Transformable Assets Raw material/ building blocks that serve as inputs into finished products. It has economic value but does not yield an ongoing stream of value.	Store of Value Assets Cannot be consumed, nor can it generate income. Nevertheless, it has value as it is a store of value asset.	Cryptographic Assets Can function simultaneously as Capital, Consumable/ Transformable, and Store of Value Assets thanks to their permission-less, distributed, and cryptographically secure nature.
Traditional Assets	Equities	X			
	Bonds	X			
	Income Producing Real Estate	X			
	Commodities		X		
	Precious Metals		X	X	
	Currency			X	
	Fine Art			X	
Crypto Assets	Cryptocurrencies	X	X	X	X
	Security Tokens	X	X	X	X

Sources: "Bitcoin: Ringing The Bell For A New Asset Class" by Chris Burniske and Adam White, 2016; and "What is an Asset Class, Anyway?" by Robert Greer, 1997.

Evolution of Capital Formation

EVOLUTION OF CAPITAL FORMATION

- Bitcoin has disrupted money and gold
- Ethereum has disrupted capital by creating a new crowdfunding model (ICO)
- Tokenisation is disrupting transferability of capital – anything can be securitised, digitised and tokenised (STO)

TRADITIONAL ASSETS ARE MOVING ONTO BLOCKCHAIN

LEGACY ASSET	CRYPTO EXPRESSION	CRYPTO ASSET
Gold	Store of Value	Bitcoin
Stocks	Digital Utility	Ethereum
Funds	Blockchain Protocols	Cryptocurrencies
Real Estate	Digitised Equity	Security Tokens
Commodities	Fractional Ownership of Assets	Security Tokens

Initial Coin Offering (ICO) is a new funding model, offering funding through crowdsourcing, without a proven product. ICOs are enabled by the token economy, which implies the use of a proprietary utility token.

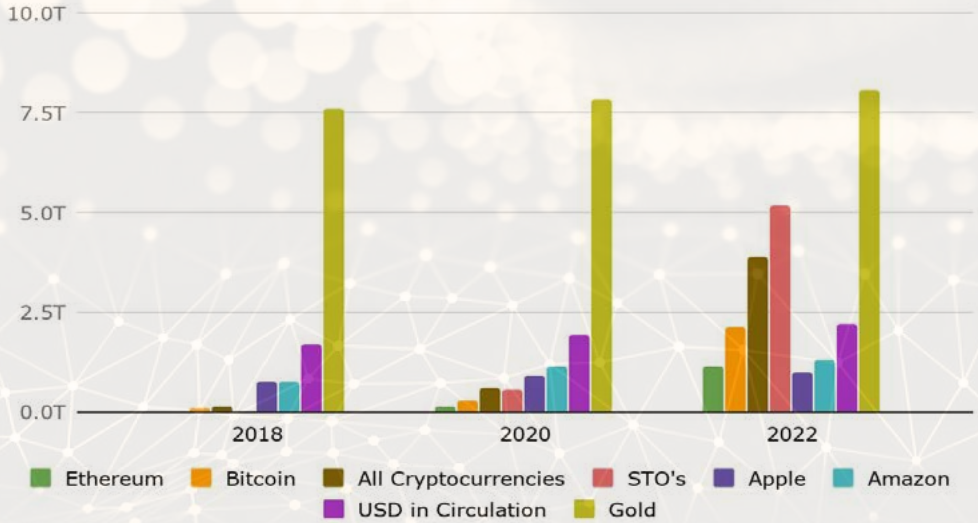
Security Token Offering (STO) is an alternative to private equity and VC financing. Security tokens represent financial instruments, and have legal rights similar to traditional assets.

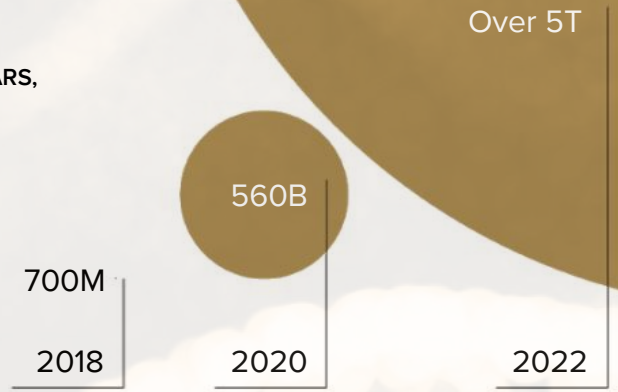
Purple Securities are value-adding tokenised securities that have no real-life analogues. They will contain a mixture of traditional security features and utility token features.

Security Token Market Opportunity to 2022

THE GLOBAL SECURITY TOKEN MARKET IS SET TO EXPAND EXPONENTIALLY OVER THE NEXT 2 YEARS, POTENTIALLY GROWING TO OVER US$ 5 TRILLION BY 2022

CRYPTO VS TRADITIONAL MARKETS IN US$





SECURITY TOKEN MARKET SIZE IN US$

TRADITIONAL IPO MARKET IN US$ BILLIONS

Sources: *Brave New Coin* *Techemy Capital* *The World Bank "Market Capitalisation"* *SIFMA "Bonds Outstanding"* *Bank of International Settlements "Global Derivatives"* *Savills "Global Real Estate Value"* *BP "Statistical Review of World Energy"* *Bloomberg Markets "Global Debt"* *SEC "Capital Raising in the US"*

Security Token Market Opportunity to 2022: Assumptions

STO MARKET IS EXPECTED TO REACH US$ 5 TRILLION+ BY YEAR 2022

STOs will represent around 1% of Globally Traded Assets by YE 2022

Compound Annual Growth Rates (CAGR %) analogous to the ICO market

STOs will disrupt and eventually overtake private offerings

Globally Traded Assets Markets	YE 2022
1% of global stocks	~US$ 0.9 trillion
1% of US bonds	~US$ 0.47 trillion
0.1% of global derivatives	~US$ 0.7 trillion
0.5% of global real estate	~US$ 1.79 trillion
1% of global gold	~US$ 0.08 trillion
1% of global oil reserves	~US$ 0.84 trillion
0.1% of global debt	~US$ 0.3 trillion
Total of combined asset markets	**~US$ 5.08 trillion**

STO 4-year CAGR for 2018-2022 is modelled at ~776% (based on the assumption that it will grow at a commensurate rate to that of ICO's 2-year CAGR for 2016-2018 of 505%).
Globally Traded Assets CAGR for 2018-2022 is modelled based on such indices as:

- US Venture Capital Investment 4-year CAGR 2014-2018 of 19.13%.
- MSCI World indices 4-year CAGR 2014-2018 of 4.22%.

Security tokens will capture a significant proportion of funds raised via private offering channels, such as, Reg-A, Reg-D, Reg-S, etc. In 2014, in the US alone there were 33,429 Reg-D offerings reported, accounting for more than $1.3 trillion raised, while the entire private channel accounted for more than $2.1 trillion. Techemy forecasts the STO market to outperform this significantly as it will not be limited to private offerings.

Sources: *BraveNewCoin* *Techemy Capital* *The World Bank "Market Capitalisation"* *SIFMA "Bonds Outstanding"* *Bank of International Settlements "Global Derivatives"* *Savills "Global Real Estate Value"* *BP "Statistical Review of World Energy"* *Bloomberg Markets "Global Debt"* *SEC "Capital Raising in the US"*

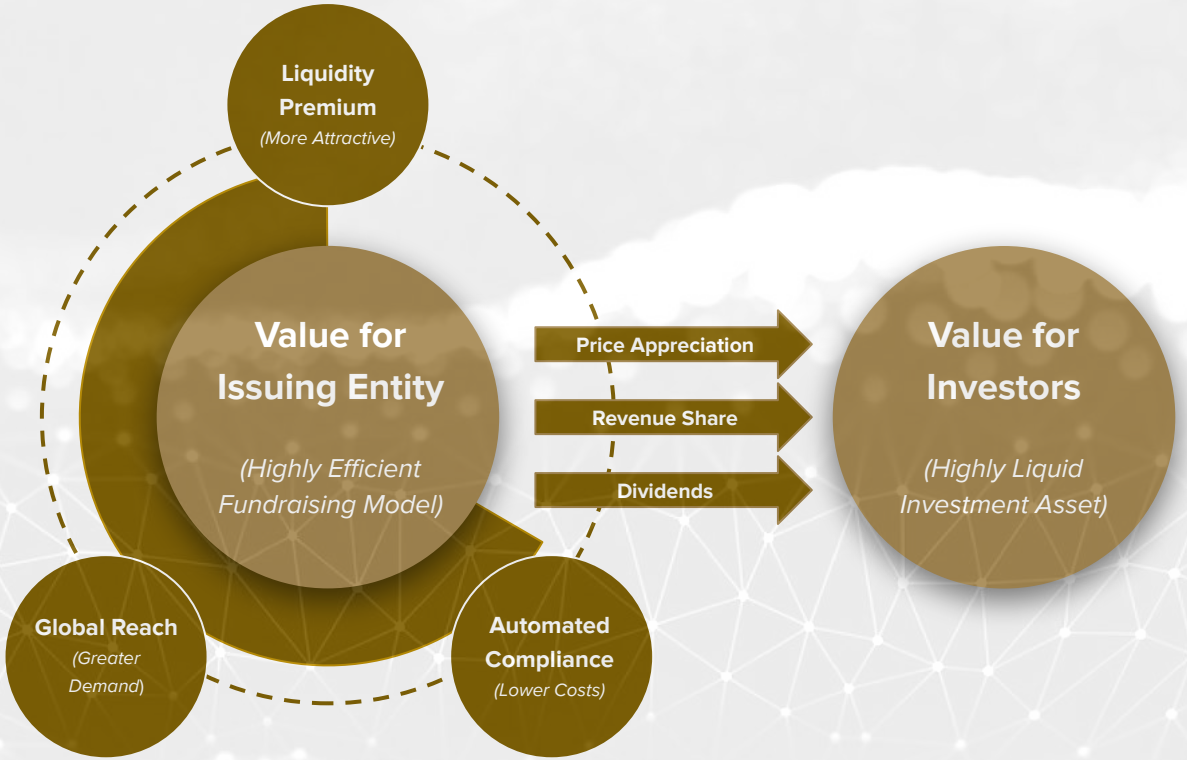
Breakdown of Security Token Offerings

A **Financial Security** includes any financial investment that derives its value from an underlying asset. It can be a tradable financial asset of any kind, broadly categorised into debt, equity and derivatives, although this may vary slightly between jurisdictions.

A **Security Token Offering (STO)** is a compliant private offering made on the blockchain. It is a digitised financial security that can be backed by assets, profits or revenue of a company, and can offer legal rights such as voting or dividend distribution. STOs are an emerging alternative to private equity and VC financing as they allow for businesses to lock in funds without locking in investors. An STO may create a non-dilutive way of financing a company's portfolio, allowing it to raise funds without having to sell equity in its portfolio companies, but instead tokenise its cash-flows.

Security Tokens don't change the fundamentals of a financial security, but shift an asset's ownership onto blockchain's immutable distributed ledger. This is done by digitising an asset and representing its value and allocation of shares in the form of a cryptographic asset (a security token). Therefore, security tokens are an investment contract similar to traditional financial instruments, aimed to reward investors through such means as: revenue share, dividends, and favourable price movements.

STO VALUE FLOW



Benefits of Security Tokens

Benefits	Traditional VC	Cryptocurrencies	Security Tokens
Regulatory Oversight	✔		✔
Automated KYC/AML			✔
Low Cost / Affordability		✔	✔
Fractional Ownership		✔	✔
Global Liquidity Pool		✔	✔
Time to Liquidity < 1 Year		✔	✔
24/7 Trading		✔	✔
Real-Time Settlement		✔	✔
Programmable Rights		✔	✔
Functionality (Utility)		✔	✔
Community Support		✔	✔
Transparency		✔	✔

BOTTOM LINE

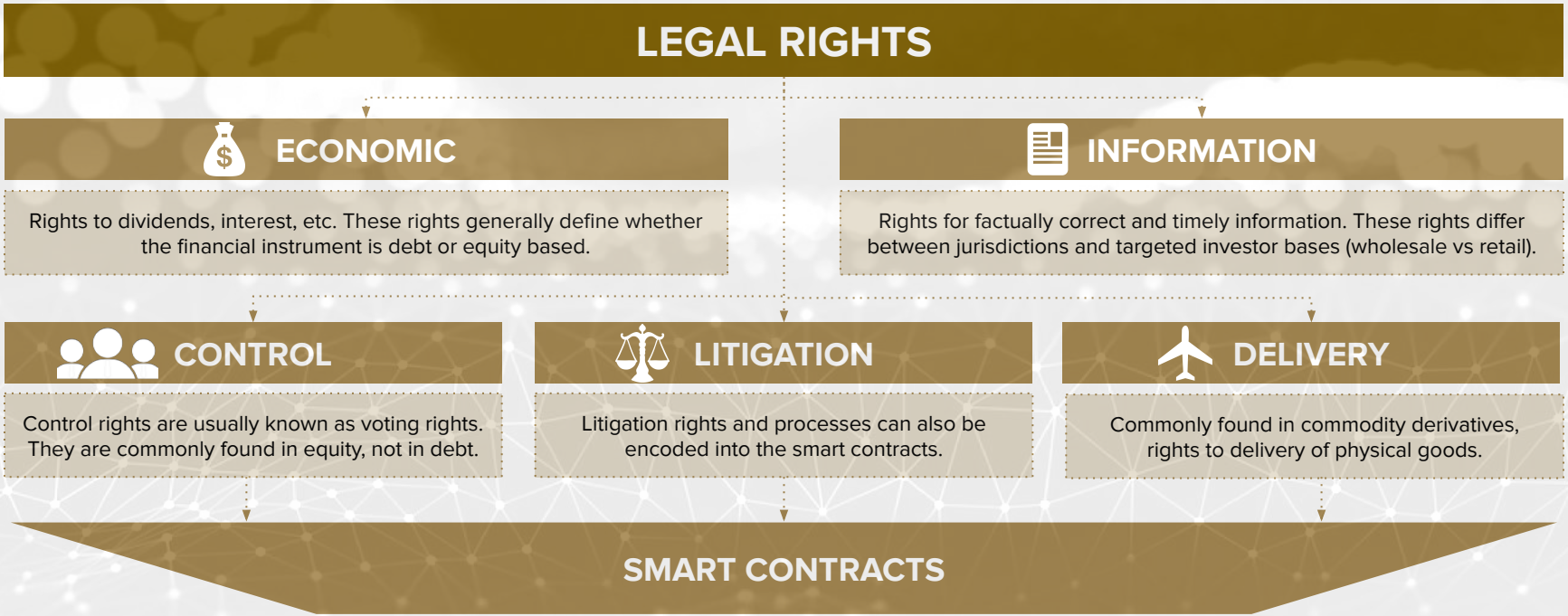
Due to their programmable nature, security tokens are naturally more efficient and scalable. They allow for the automation of a multitude of functions that are performed by service providers in traditional finance. Security tokens drive greater price discovery by providing access to a wider pool of international investors. All this while being regulated and compliant.

Blockchain and smart contracts have the ability to address inefficiencies in the financial industry. The major economic benefit being cost reduction, derived from optimising functions such as:

- Accounting and audit processes
- Paperwork related to managing securities (e.g. collecting signatures, wiring of funds, etc.)
- Issuance and transactions fees charged by middlemen
- Enablement of real-time settlements on secondary markets, therefore decreasing settlement risk
- Automation of dividend payments and execution of other contractual items.

Legal Rights in STOs

STOs are not homogeneous in nature, they can be structured in a myriad of ways and can be backed by different types of underlying assets. However, STOs bear the same types of legal rights as traditional financial instruments. These include economic, control, information, litigation, and, in the case of commodity derivatives, physical delivery rights. All of these attributes can be programmed into smart contracts underpinning security tokens, thus defining each party's obligations and reducing counterparty risk.



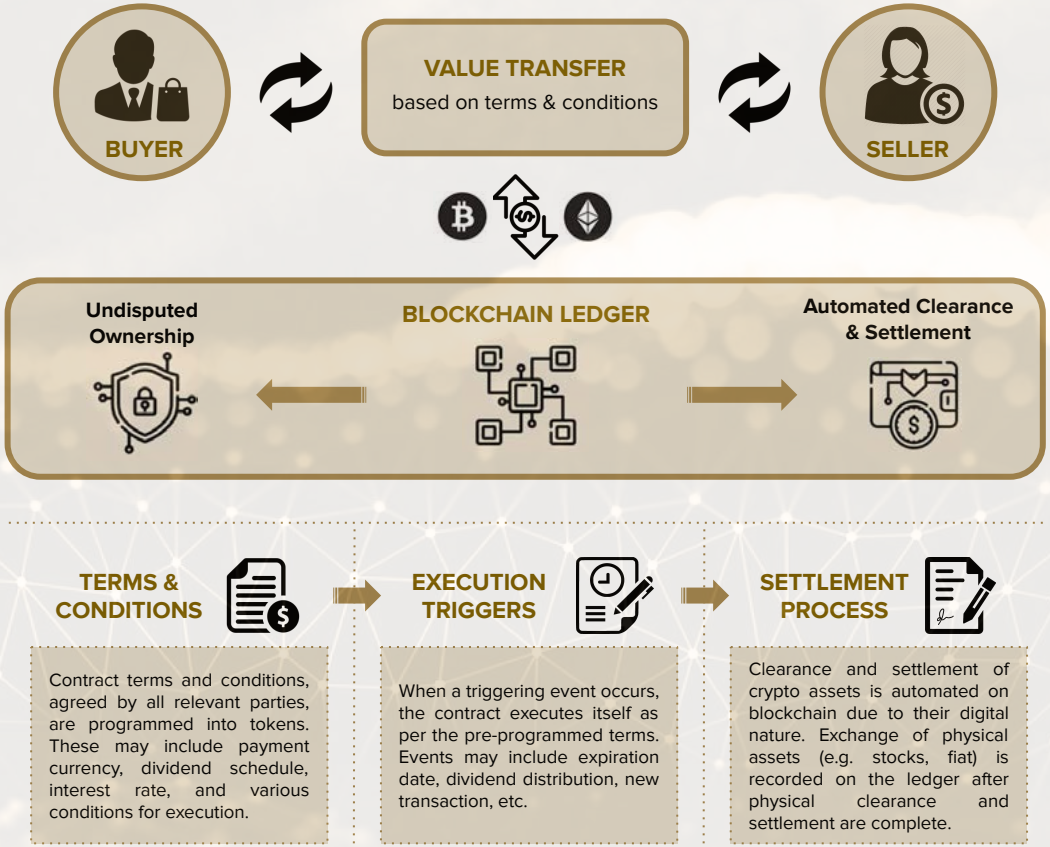
Smart Contracts

Smart contracts are an algorithmic software code that verifies terms and conditions in a conflict and human-free manner. They allow for security tokens to be flexibly programmable to streamline or automate key investment features.

Rights and obligations can be programmed into the tokens via these smart contracts. The automation of functions such as dividend distribution allows for the reduction of costs and increased efficiencies. Similarly, smart contracts can ensure cross-jurisdictional compliance of KYC & AML requirements, thus protecting both investors and issuers.

As a general rule, smart contracts are immutable - once written, they cannot be changed. However, there are blockchain platforms that allow for such functionality, for example Stellar (as opposed to Ethereum). Therefore, smart contracts can be created with a flexibility that reflects the requirements of the parties involved in an investment.

Mechanics of Smart Contracts



Security Token Classification 1/2

Techemy Capital has employed a financial and accounting perspective to categorise security tokens. This view on security tokens is not prescriptive, and serves only as guidance to make STOs understandable and relatable to traditional finance.

There are three major security token groups that are distinguishable, representing a traditional balance sheet: *assets, equity, and debt.*

Notably, there is an overlap between the three groups. For example, some structured finance or securitised products may combine features from two or more groups.

Some tokenised assets may not immediately be perceived as securities (e.g. commodities, fine art). However, the expectation is that through the lens of securities laws (e.g. the Howey test in the US), such tokenised assets will be classified as securities. Specifically, if they are an investment of money in a common enterprise/project with an expectation of profits from the efforts of a third party. A prominent example of tokenisation is of an Andy Warhol painting by the decentralised art gallery Maecenas, which offered tokens with fractional ownership rights.

SECURITY TOKEN GROUPS

Tokenised Assets

- Real estate & infrastructure
- Commodities
- Fine art & collectables

Tokenised Equity & Revenues

- Preferred & common stocks
- Cash-flows with no or limited equity rights

Tokenised Debt

- Regular & convertible bonds
- Inflation-indexed bonds
- Peer-to-peer lending

NEW STO CONCEPTS

Within good reason, anything can be tokenised. The first wave of tokenisation will encompass digitisation of already existing financial structures. However, the flexible yet immutable essence of crypto assets will eventually lead to the appearance of new financial instruments that are not conceivable in traditional investment banking. Some of the ideas contemplated across the industry include:

- Sports teams can tokenise players so that their fans can support their career development, reaping benefits should the player succeed/achieve notable results
- Companies needing cash-flow could tokenise their property in order to raise capital
- Product lines can be tokenised (as opposed to a business entity). For example, investors could hypothetically purchase the rights of Instagram's cash-flows rather than purchasing shares of the holding company, which is Facebook.

Security Token Classification 2/2

ST GROUPS	ST TYPES	UNDERLYING ASSET EXAMPLES	DEFINITION, RIGHTS & BENEFITS	ST EXAMPLES
TOKENISED ASSETS	***Assets***	Income-Producing Real Estate Infrastructure-as-an-Asset	Tokens that represent assets and income-producing assets, which appreciate in value and generate interest/capital gains. Benefits may include fractional ownership, revenue share, dividends, cash-flows, voting rights, etc.	Marriott, Swiss Real Coin, Leasium
		Fine Art, Collectables		Maecenas, Artex Global
		Commodities (incl. Virtual Reality Assets)		Oleum, OneGram
	Structured Products	Securitised Bank Lending	Tokens that represent income-producing assets, which are grouped/structured to generate risk-adjusted returns.	Not yet available
TOKENISED EQUITY AND REVENUES	***Private & Public Equity***	Preferred and Common Stocks	Tokens that function as a digitised traditional stock asset, representing ownership of some third-party asset or venture and deriving their value from that property's success or failure.	Archax, Ledgity
		Synthetic Equity	Tokens that represent digitised instruments similar to traditional equity, but not necessarily representing "shares" in a company (e.g. equity swaps).	Not yet available
	Business Cash-Flows	Cash-Flows with Limited or No Equity Rights	Tokens that function as a traditional security asset, representing a stake in the wealth created by a third party and derive their value from that party's success or failure. Distinct from an equity token in that no or limited ownership of the underlying venture is created.	tZero, Bankorus
	Funds	Mutual Funds, Exchange-Traded Funds		Equi, INDX
TOKENISED DEBT	***Bonds & Debt***	Regular & Convertible Bonds Inflation-Indexed Bonds	Tokens that represent outstanding debts and liabilities, which derive their value from the debt, its interest and the creditworthiness of the debtor party.	Inveniam Capital Partners
		Peer-to-Peer Lending		Not yet available
TOKENISED DERIVATIVES	***Derivatives***	Derivatives, Options, Swaps, Futures, Forward Contracts	Tokens that represent assets with returns derived from another asset.	Not yet available

Asset Types available for Allocation

CRYPTOCURRENCIES
(not subject to securities laws)

- Store of value & medium of exchange (e.g. Bitcoin, Tether)
- Digital utility for platforms & dApps (e.g. Ether, listed ICOs)
- Primary market ICOs (unlisted)

Bitcoin
Ethereum
EOS
Qtum
Stellar

SECURITY TOKENS
(subject to securities laws)

Tokenised Assets

- Real estate & infrastructure
- Commodities
- Fine art & collectables

SwissRealCoin
THE SWISS REAL ESTATE TOKEN
ONEGRAM
OLEUM CAPITAL

Tokenised Equity & Revenues

- Preferred & common stocks
- Cash-flows with no or limited equity rights

BANKORUS
t0
THE ELEPHANT

Tokenised Debt

- Regular & convertible bonds
- Inflation-indexed bonds
- Peer-to-peer lending

INVENIAM CAPITAL PARTNERS
AUT VIAM INVENIAM AUT FACIAM
TWOGAP

HYBRID EQUITY
(subject to securities laws)

- Traditional equity
- STO convertible into equity
- Equity offer with a warrant for security tokens
- STO with a stock option

TRAVERSEL
ARCHAX
INVESTA

Hybrid Equity

- **Hybrid Equity** is a loose term that describes token sale structures for a company raising money via a combination of both traditional equity and security tokens. In most instances the token will be considered a financial security, hence most “hybrid equity” offers will be based on the “Equity x STO” model.
    - **Equity** typically represents traditional private equity of the underlying entity that holds IP on products and services. Tokens are a blockchain-based digital expression of an asset.
    - The **asset** can be anything from tokenised private equity to real estate to a revenue share to a tokenised fractional ownership of fine art.

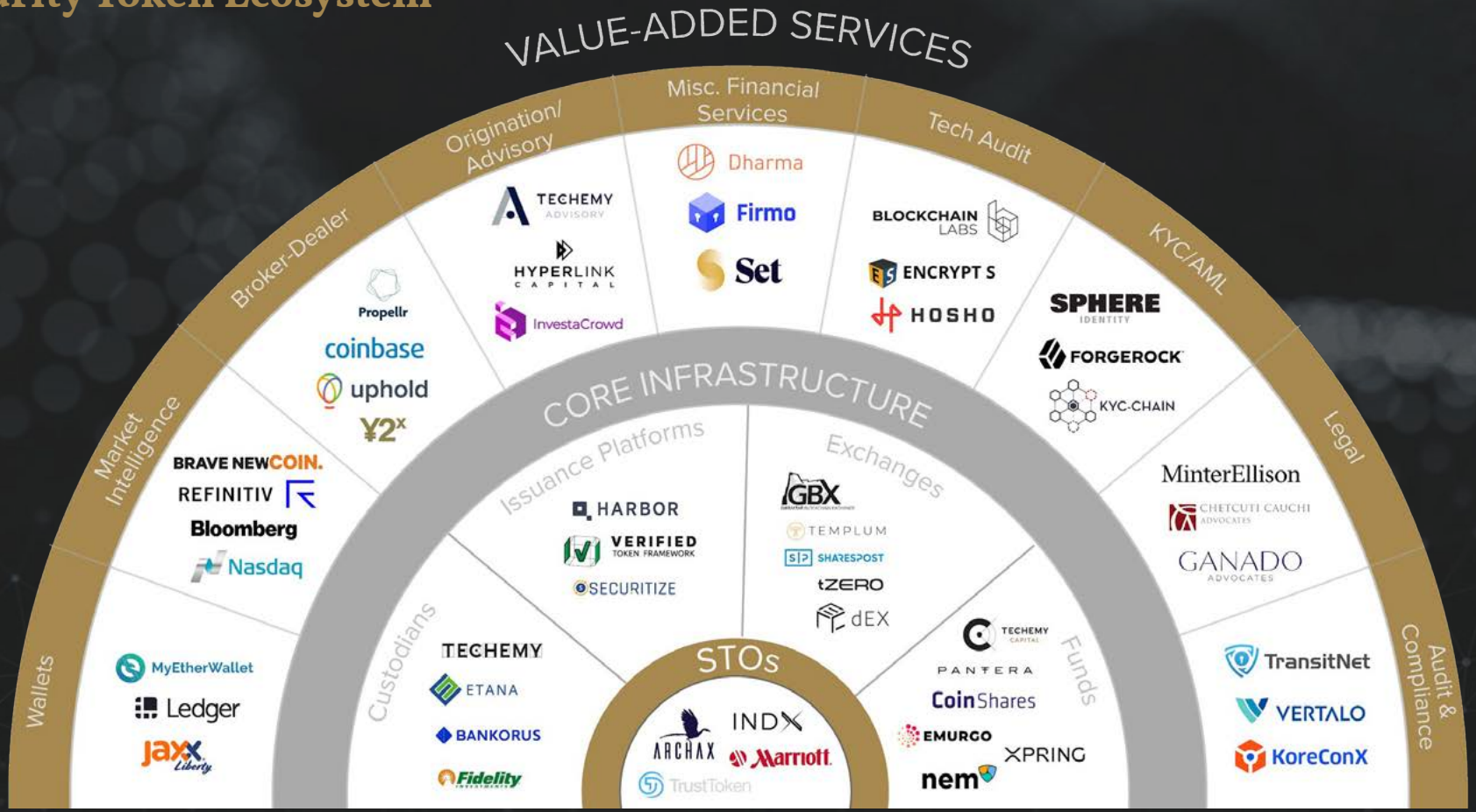
- We expect that most companies will opt-in for fundraising via the STO model, where they will offer a percentage of their equity during Series A, and an STO during Series B to E. However, Series A itself can be a combination of both offers - equity and STO. In that case, some sales/purchase agreements may have the following structures:
    - An equity offer convertible into security tokens
    - An STO convertible into equity
    - An equity offer with a warrant for security tokens
    - An STO with a stock option.

- Rights and benefits attached to such deal structures will vary in nature (i.e. rights, ownership structure, redemption, etc)

STRUCTURING & ISSUANCE

STO INVESTMENT GUIDE

Security Token Ecosystem



Issuance Platforms create and distribute tokens and are also responsible for having compliant, regulated smart contracts for token issuance.

Custodians are investment banks and financial institutions offering to hold investors' assets (both fiat and crypto) for safekeeping so as to minimise the risk of theft / loss.

Funds may include both traditional VC Funds as well as Security Token Funds and Tokenised Funds.

Exchanges (incl. ST exchanges, national stock exchanges, & crypto exchanges) facilitate trading and provide liquidity for crypto assets.

STO Structures: Tokenisation of Traditional Equity

STEP 1
Pre-STO

ABC Company wants to raise funds by selling 20% of its equity, which currently stands at 100 million shares.

A qualified STO adviser (e.g. Techemy Advisory) can help ABC to structure the deal and work the token economy out (i.e. how many tokens should be minted, at what price, token rights and benefits, burn mechanism, etc). This can be similar to preferred or common shares, although the structure can be very diverse.

STEP 2
STO Issuance & Primary Trading

Issuance. ABC approaches an Issuing Platform (e.g. Harbor) that digitises 20% of ABC's shares, presented in a blockchain token form at 1 share = 1 token. The issuing platform will programme the tokens' rights and benefits into smart contracts reflective of ABC's needs - such as limits on investor count, lock-up periods, flowback restrictions, buyback processes and so on.

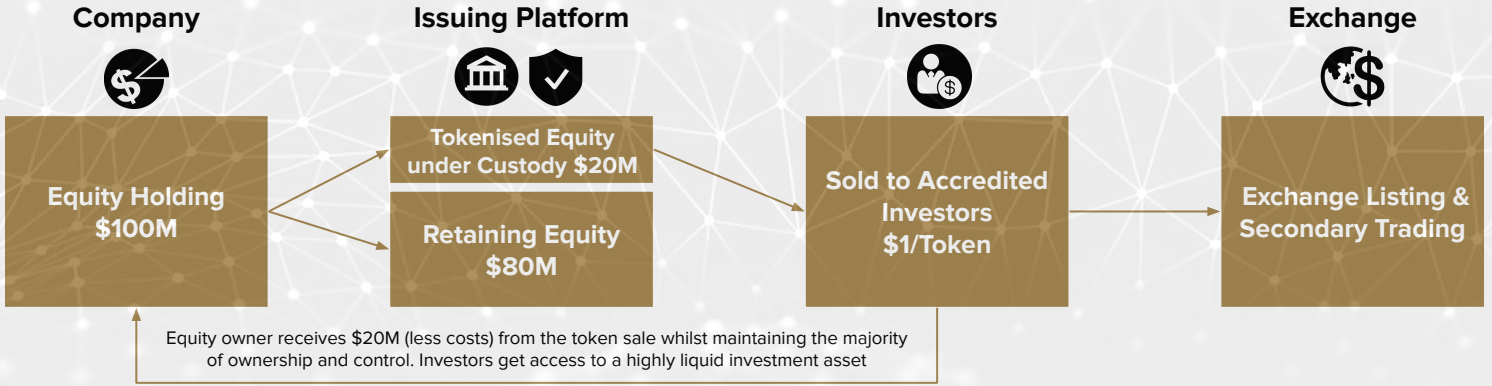
Primary Trading. The issuing platform sells the tokens to accredited investors at $1 per token, collects the proceeds and distributes the issued tokens. The issuing platform will conduct seamless KYC/AML/Accreditation processes to ensure compliance. An investment adviser can syndicate the deal if required.

Custody. Once tokens are minted, the issuing platform can either self-custodise the tokens or hire a certified 3rd party provider (e.g. Bankorus). The same is applicable to the proceeds.

STEP 3
Post-STO & Secondary Trading

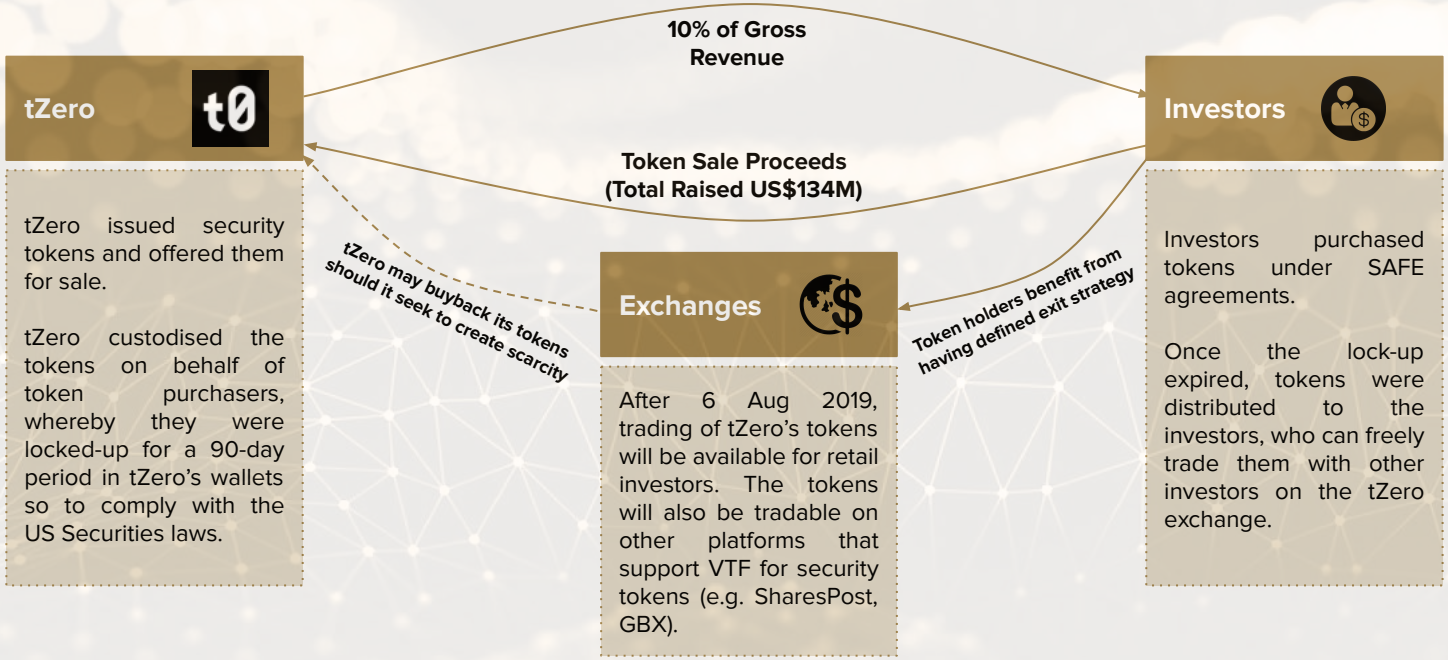
ABC lists the tokens on a security token exchange (e.g. Templum), which creates an opportunity for secondary market trading, thus boosting the token liquidity. Secondary trading will be possible once any applicable lock-up period expires. This is automated through smart contracts.

If the tokens were built on an interoperable security token standard (e.g. using Verified Token Framework or VTF), they will be compatible with other exchanges across the globe (e.g. tZero, SharesPost).



STO Structures: Tokenisation of Revenues

Following the process described in the previous slide, a company can tokenise its revenue or cash-flow without offering any equity rights (or offering a limited amount). One example is **tZero**, an alternative trading system (ATS), regulated by the US Securities and Exchange Commission (SEC). The tZero tokens are structured to pay investors 10% of the consolidated adjusted gross revenue on a quarterly basis (at the board's discretion). The tokens offer no voting rights, but do hold a preferred equity right to assets/funds in case of liquidation. tZero did not have to use an external issuance platform and a custodian, as its core business is to provide such services.



STO Structures: Tokenisation of Real Estate

STOs can represent an ownership stake in various real estate ventures: an existing property, a development project with rights to its future revenue streams in the same ways as traditional securities offer, and a real estate investment trust (REIT).

Generic Structure of Tokenised Real Estate

Example of Tokenised Real Estate

Property	Tokenisation	Investors	Security Tokens
St. Regis Aspen Resort was sold for **US$18M** as security tokens. Each token was backed by shares through an SPV that owns the resort (REIT).	The equity was tokenised by the **Templum** issuing platform**.** KYC/AML processes as well as economic rights were programmed into smart contracts.	Accredited investors were then able to purchase these tokens to obtain an indirect fragmented equity ownership stake of the St. Regis Aspen Resort.	Ownership of property can now easily flow on a blockchain ledger in a transparent, frictionless and immutable manner.

STO Structures: Tokenisation of Fine Art & Collectables

STOs may represent artwork and collectables, allowing multiple investors to hold a specific share of value in an object. Such STOs are potentially a viable long-term investment vehicle that can gain value year over year, without being affected by crypto market fluctuations. With collectibles, non-fungible tokens can be issued, whereby each token would represent only one object with its own rights and benefits, non-compatible with other tokens in the same series (e.g. antique coins, unique stamps, etc).

Generic Structure of Tokenised Fine Art

Example of Tokenised Fine Art

Fine Art	Tokenisation	Investors	Security Tokens
Andy Warhol's **"14 Small Electric Chairs"** was split into fractions called ownership certificates, held by an SPV. 49% of the art was made available to investors	Ownership certificates were tokenised by **Maecenas**, which was then auctioned on Maecenas' platform.	Accredited investors were able to bid for these tokens through a "Dutch Auction" process.	Ownership of the painting can now flow easily on the blockchain in a transparent, frictionless and immutable manner.

STO Structures: Tokenisation of Commodities

STOs may represent ownership of goods and services that have an end use, including consumable and transformable assets such as precious metals, diamonds, crude oil and gas, corn, wheat, wine, etc. While commodity-backed STOs are relatively new to the market, they will most likely be structured as pooled funds. If a commodity is rented to others, it can be tokenised as a fixed income asset.

Generic Structure of a Tokenised Commodity

Example of a Tokenised Commodity

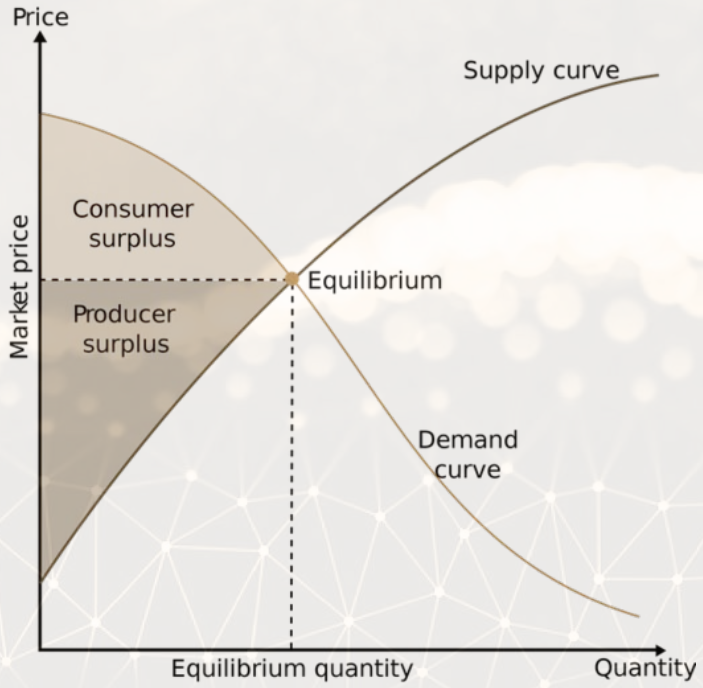
Commodity	Tokenisation	Investors	Security Tokens
A private equity firm, **GSR Capital**, is currently working on tokenising approximately **US$200M** worth of **cobalt metals**, which is used to make electric vehicle batteries.	**tZero** has been contracted to build an ecosystem in Asia for tokenised cobalt purchase contracts, and to design a compliant token.	Cobalt tokenisation will develop means to bring liquidity to the cobalt metal market, which historically has been highly illiquid.	Cobalt-backed tokens will streamline the identification process while tracking the supply of cobalt, hence bringing transparency to the supply chain.

Security Token Economics

Minting. Crypto assets possess value due to their properties (e.g. the value of an underlying asset, economic rights, etc.) or due to demand. As with traditional financial instruments, the dilution of a tokenised asset should be reflective of economic factors underpinning supply and demand. The determination of the token price should be reflective of an STO's raise goals, as well as the quantity demanded and quantity supplied. Oversupply or poor dilution of holdings has been associated with a consolidation of market value and proportionate price drops.

Burning. Businesses contemplating an STO may seek to employ a burn mechanism to reduce the quantity supplied, thus creating scarcity. For example, each fiscal quarter Bankorus intends to buyback and burn its tokens for an amount equal to 10% of the core operating revenue of said quarter.

Staking. Businesses launching an STO with tokens subject to higher velocity may seek to embed a staking mechanism. This incentivises investors to hold the tokens. In the Bankorus example, tokens that are staked on the Bankorus platform (or their partners' exchanges) get a payment equal to 15% of quarterly core operating revenue, proportionate to the percentage of tokens they own.



Security Token Issuance 1/2

Security Token Issuance involves significant technical and legal challenges. With KYC/AML and other regulatory requirements, both investors and issuers must ensure that tokens are traded and exchanged between permitted parties only.

For security tokens to be programmed in compliance with regulations, security protocols are needed. Whilst there are a number of protocols available in the market that address this problem, the underlying issue of interoperability remains unsolved. To gain mass adoption, security tokens have to be able to “talk” to, recognise, and work with each other - in other words, they have to be interoperable.

Blockchain Token Association (BTA) and Techemy Limited, as a founding member of the BTA, have built an ecosystem of security token players, collaborating across the entire industry to ensure synergy between issuing platforms, exchange operators, incubators and traders of security tokens. In October 2018, BTA launched an industry-wide initiative to support the growth of the security token ecosystem by establishing the Verified Token Framework (VTF) workgroup. The VTF is set to facilitate the new security token universe with full interoperability between different exchanges and tokens.

VTF ECOSYSTEM

tZERO
TECHEMY
GIBRALTAR STOCK EXCHANGE
SHARESPOST
GABI
nem
dEX
ALCHEMIST
HYPERLINK CAPITAL
BANKORUS
AnyPay
overstock.com
BLOCKCHAIN LABS

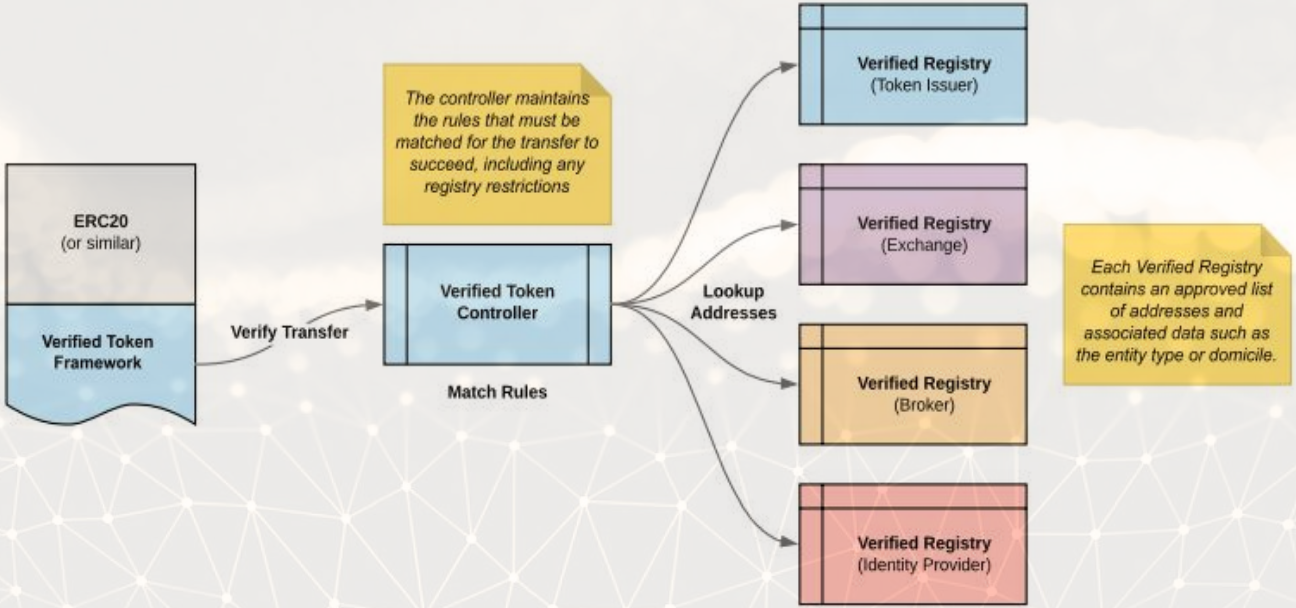
Through its extensive industry-wide collaboration, Techemy has access to exclusive, early-stage, high-shelf deal-flow.

Security Token Issuance 2/2

In October 2018, the Blockchain Token Association (BTA) hosted over 100 guests at the first BTA Security Token Protocol Summit in NYC. The Verified Token Framework (VTF), a common framework to facilitate market interoperability of security tokens, was launched the same week under the umbrella of the Blockchain Token Association (BTA).

Interest in the VTF has been high since the event, with a number of organisations looking to participate in the framework development. Increasing awareness of and participation in the VTF initiative is a key priority for the BTA in 2019-2020, with the aim of building it into the foremost reference document, codebase, and community for the security token ecosystem. The core codebase of the VTF is open-sourced.

VTF TECHNICAL SNAPSHOT



Verified Token Framework (VTF) aims to create a specification to supplement the current generation of tokens, so any token issuer can maintain control over who can receive the tokens, and keep regulatory bodies satisfied that the transfers are restricted to only those deemed compliant (i.e. accredited investors).

Security Token Custody

Self-custody is a feature unique to crypto assets. Both cryptocurrencies and security tokens can be stored by their owners without the help of traditional financial intermediaries, such as banks, registered brokers-dealers or qualified custodians. However, as security tokens are financial instruments, a 3rd party custodianship may sometimes be required to meet the compliance and regulatory requirements of fund management.

In order to protect against theft or loss, crypto-custodians can hold tokenised assets on behalf of investors. Such providers work with multiple players in the security-token ecosystem, including investors, broker-dealers, and trading platforms. Enterprise grade custody is typically required for institutional investors.

Custody Types Required for Crypto Asset Management

Cold Custody

-Physical storage of hardware crypto wallets (aka “cold storage”) such as Nano S.

-Physical storage of crypto wallet seeds (that allow users to access their crypto wallets).

Hot Custody

Digital storage of software and web-based wallets (aka “hot storage”), including those located on crypto exchanges.

Fiat Custody

-Traditional custody of fiat funds held under a trust in a bank account.

-This may include legal paperwork, such as original SAFT/SAFE documents.

Key Criteria for a Crypto Custodian

- Located in a politically and economically stable jurisdiction.
- 24/7 accessibility regardless of geolocation and time-zones, this includes admin/contact person as well as holders of wallets’ pin-codes.
- Ability to provide physical security for cold wallets and their seeds. This includes business continuity and disaster recovery policies and processes.
- Ability to transact via cold wallets (deposits/withdrawals), hence must be crypto-savvy and be familiar with associated web-services (e.g. Ledger Live, Etherscan, etc.)
- Ability to execute and process crypto funds (some tokens require use of crypto exchanges). Must have or be able to quickly set up corporate accounts on crypto exchanges. The Fund Investment Manager needs to be able to access such accounts as required.
- Must have a bank account set up for storing and processing fiat funds.
- Ability to provide full visibility over transactions across cold and hot wallets, crypto exchange accounts, and bank accounts.
- (Not critical) Being able to accept fiat funds directly from investors (LPs), with Fund Investment Manager responsible for KYC/AML compliance.
- (Preferable) Must have a recognised brand and a track record in fiat custody (e.g. Fidelity, Goldman Sachs, etc.)

Regulation and Taxation *(as of 1 February 2019)*

Regulations relating to STOs are still being developed. The general expectation is that STOs will be treated as traditional financial securities. Implications of such regulations will be seen across a multitude of parameters, including:

- **Who can invest in STOs.** STOs will generally be limited to high networth individuals, banks, financial institutions, and wholesale investors. E.g. “Accredited investors” in the US, “sophisticated and professional investors” in the UK.
- **Who can issue and sell security tokens**. E.g. Holders of the US broker-dealer license, the EU investment firm license, FCA regulated brokers and corporate financiers, the Hong Kong “Type 1” license.
- **Who can run a security token exchange.** E.g. Holders of the US Alternative Trading System (ATS) license, the EU Multilateral Trading Facility (MTF) license, the Liechtenstein banking license.

Taxation of Security Tokens. While no direct comments have been made regarding the specific taxation of security tokens, it can be hypothesised that tax regulation will relate to the underlying asset that is getting tokenised.

In the US example, tokenised securities will be bundles of economic rights, and therefore have three categories for US Federal Income Tax purposes: *Equity, Debt,* and *Shared Asset Ownership.*

- Deciding between **equity and debt** will be just the same as in regular circumstances. Factors to consider include: presence or absence of a fixed maturity date, right to enforce payment of principal and interest, participation of management, etc.
- **Shared ownership** is not easily dissectable. Tax law has created “tax partnerships” to deal with this new ecosystem. One way to avoid the “shared ownership dilemma” is to use a Special Purpose Corporate Vehicle (SPV). This allows for selling or contributing the asset to the SPV, from which investors can purchase equity.

TECHEMY
CAPITAL

ABOUT TECHEMY

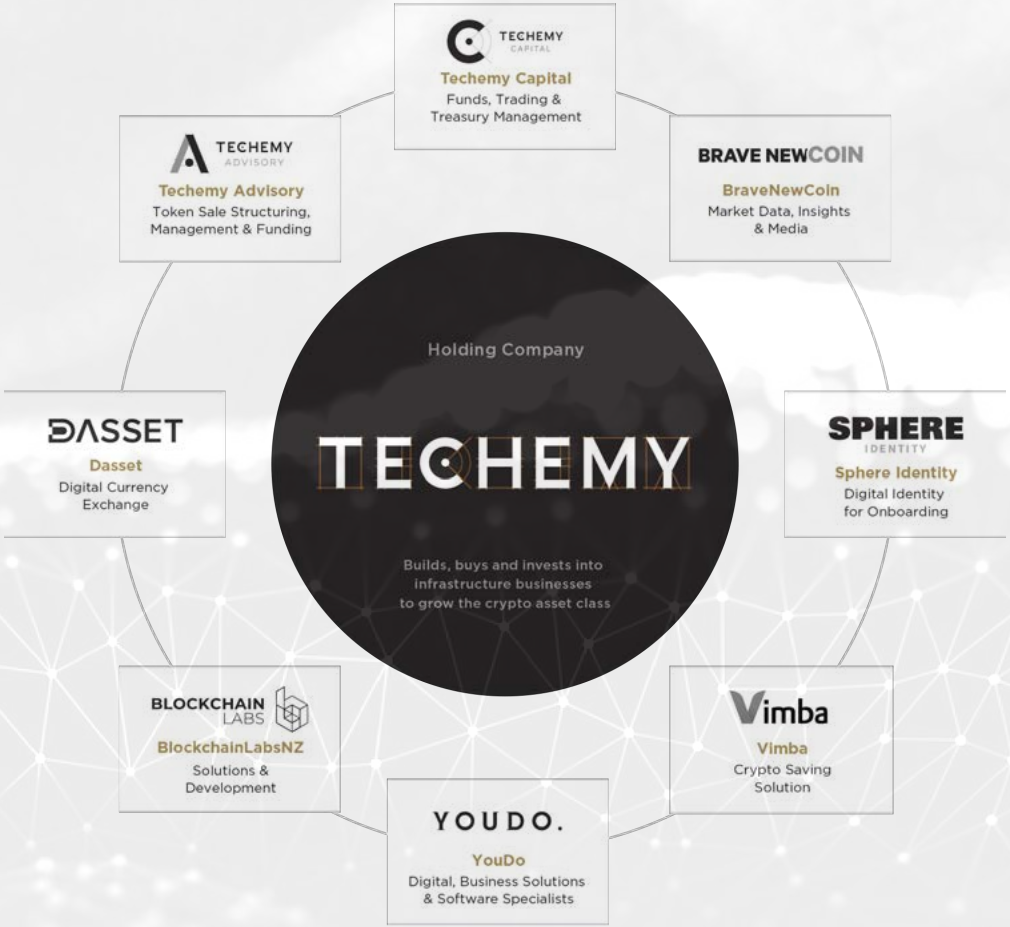
Techemy Group

TECHEMY IS A VENTURE BUILDER. WE HAVE FOUNDED, OPERATED, ACQUIRED AND GROWN A NUMBER OF BUSINESSES WHICH SUPPORT OUR CORE THESIS THAT A 4TH MAJOR SUPER-CLASS OF ASSETS HAS ARISEN.

Techemy takes a mid to long term thematic approach to growth and recognises that working in an exponential industry requires a company structure that can meet our objectives in an ever changing landscape.

Techemy provides Financing, Accounting, Governance, Operations, Legal, HR, Strategy and Business Development, to our various majority owned blockchain businesses. This allows our portfolio companies to focus on building and shipping products, faster and with more precision than conventional start ups.

The whole is greater than the sum of its parts. By investing in, owning, and developing companies at every stage of the blockchain value chain, we produce synergies that would otherwise not be possible. This results in informational and executional advantages for our clients and the companies in our group.



TECHEMY

CAPITAL

Techemy Capital is a boutique investment management company with unparalleled expertise in global crypto asset investment. It seeks to provide clear, well researched and leading edge investment recommendations to fund managers and institutional investors.

- **About** – Techemy Capital Limited is a New Zealand based subsidiary of Techemy Limited, a global leader in investment management that specialises in bottom-up & top-down investment research into the 4th super class of assets, driven by the blockchain's distributed ledger technology.
- **Best in Class** – Techemy Limited was founded in 2014 on the back of the success of Brave New Coin, the market data business. Techemy has built a globally recognised digital investment bank, which has become a leader in multiple fields, including capital markets, asset management, data services, blockchain development, data analytics, identity, crypto-trading and exchanges. The company employs over 100 professional staff across New Zealand, Australia, the UK and the US.
- **Funds** – Techemy Capital launched its first crypto fund "HODL 1" in April 2018 to invest in the second wave of crypto assets, known as Utility Tokens (ICOs). The fund is up 80% since inception in Ether terms. The fund's investor base is global in nature and is a "who's who" of the crypto assets space.
- **Institutional** – Techemy's target market is in the institutional market where we have a diverse client base of accredited and qualified purchasers.
- **Management** – Techemy has a deep bench of front and back office expertise, including portfolio managers, research analysts, compliance, accounting and experienced executives.
- **Alignment** – as an Investment Adviser, Techemy Capital aligns its own interests with its investors. Remuneration is performance driven which drives the team to set the bar for best in class institutional portfolio management.

Investment Adviser Team

Fran Strajnar
Group *CEO / Director*

A multi disciplined entrepreneur and blockchain evangelist, Fran co-founded Techemy and Brave New Coin. Fran has been deeply involved in the cryptocurrency and blockchain communities from their earliest days. Describing his mission in life as "terraforming the crypto asset landscape", he is a sought-after industry thought leader and subject matter expert.

Matthew Paget
Group COO

A barrister and solicitor since 1992, Matt's experience spans banking, finance, and corporate law. He has held senior positions at Norton Rose London, HSBC London and Deutsche Bank Sydney as well as various private equity and fund management organisations. He has specific expertise in derivatives and structured products, mergers and acquisitions, private equity and venture funding.

Michael Carr-Smith
Head of Investment Management

Michael oversees the portfolio management and research responsibilities of Techemy Capital. He has over 25 years of investment banking and capital markets experience, most of that while working in New York City with the large Investment Banks. Michael was a specialist in international equities prior to joining the Techemy Capital team.

Donn Krassiyenko
Investment Research Manager

Donn oversees the day-to-day operations of Techemy Capital, investment qualification and due diligence processes, and supports corporate and M&A strategies. He is an experienced and qualified business analyst with a decade-long track record working across the ICT industry and technologies, shaping its landscape across AI, cloud, mobility, and cybersecurity.

Investment Adviser Team

Richard Mannell
Director

A seasoned entrepreneur with a strong finance background, Richard has led a number of start-ups from the concept stage through to successful commercial launch, profitability and an ultimate sale. He is a blockchain veteran with wide-ranging experience in token issuance management, deal structuring and investing. Richard is focused on strategy and risk management.

Jason Wood
Head of Compliance & Audit

Jason oversees the compliance function, ensuring that Techemy Capital adheres to regulatory requirements associated with Anti-Money Laundering and Countering Financing of Terrorism. Jason is responsible for ensuring that we have processes in place to adequately perform customer due diligence as required.

Rob Brewis
Chief Trading Officer

An experienced commodities trader in both physical and derivative products over a 25 year career including Enron, Shell, Vitol, and Managing Director of JP Morgan (Asia) and Sempra. Rob is managing Techemy Capital's trading team, ensuring the development and growth of the trading business.

Liz Forde
Finance Manager

An experienced finance executive, Liz oversees all aspects of financial management, systems and reporting across the Techemy group of companies. Liz is responsible for establishing and enforcing accounting and auditing policy to enhance the transparency and relevancy of financial reporting and professional performance of the company.

Disclaimer

- This presentation contains information, ideas and analysis which are proprietary to Techemy Capital Limited (“Techemy” or the “Company”). By agreeing to receive this information you also agree to respect the confidential nature of this entire presentation. Specifically you agree not to reproduce in any manner any part of the information contained herein without our prior written consent. This presentation has been prepared by and issued by Techemy to assist in informing interested parties about security tokens and STOs. It should not be considered as an offer or invitation to subscribe for or purchase any securities in the Company or fund or as an inducement to make an offer or invitation with respect to those securities.

- This presentation may contain forward looking statements. Whilst Techemy has no reason to believe that any such statements are either false, misleading or incorrect, it cannot and does not warrant or guarantee that through either the passage of time or actions beyond the control of Techemy they will not become so. You should not act and you must refrain from acting in reliance on any of this presentation material. Nothing contained in this presentation constitutes investment, legal, tax or other advice. This overview does not purport to be all inclusive or to contain all information, which its recipients may require in order to make an informed assessment of security tokens and STOs.

- Neither the Company nor its advisers has verified the accuracy or completeness of the information, statements and opinions contained in this presentation. Accordingly, to the maximum extent permitted by law, the Company makes no representation and gives no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for, the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omissions, from any information, statement or opinion contained in this presentation.

MATTHEW PAGET
COO/Head of Strategic Investments
matthew.paget@techemy.capital

DONN KRASSIYENKO
Investment Research Manager

CALEB WILKINSON
Investment Analyst

TECHEMY CAPITAL

www.techemy.capital

Ground Floor, 162 Victoria Street West

Auckland, 1010, CBD, New Zealand

APPENDIX

STO INVESTMENT GUIDE

Regulation of Crypto Assets *(as of 1 February 2019)*

Below is a list of countries that have made official comments regarding their position on crypto assets. It is expected that the countries in the "legal/regulated" category will be the first to legally recognise and regulate security tokens.

Regulation Status	Country
Illegal	Bangladesh, Bolivia, China, Ecuador, Indonesia
Legal / Regulated	Australia, Bahrain, Bulgaria, Canada, Finland, France, Germany, Iceland, Israel, Japan, Luxembourg, Norway, Philippines, Slovenia, South Korea, Spain, Switzerland, Taiwan (Cautioned), Thailand, United Kingdom, United States, Puerto Rico
Unregulated	Belgium, Bosnia & Herzegovina, Brazil, Chile, Colombia, Cyprus Czech Republic, Denmark, Estonia, Greece, Hong Kong, India (disputed), Ireland, Malaysia, Malta, Netherlands, New Zealand, Pakistan, Poland, Portugal, Russia, Singapore, Slovakia, South Africa, Turkey

Taxation of Crypto Assets *(as of 1 February 2019)*

It is currently unclear exactly how security tokens will be taxed, but an indication can be derived from the tax approach to existing crypto assets across the jurisdictions represented below.

COUNTRY	TAX APPLIED	COMMENTARY
New Zealand	***Property tax***	Capital gains (losses) will be taxed (claimed) for investors who purchased cryptocurrency for the purpose of disposal. The IRD has not yet released a guideline regarding GST.
Australia	***Property tax***	Cryptocurrencies are not considered money, foreign currency or a financial supply of goods and services, although they are considered an asset for capital gains tax purposes. There is a push for defining cryptocurrencies as money for GST purposes, however, Australia wants to conduct further research and analysis while cryptocurrency is in its infancy.
Canada	***Commodity tax***	Canadian regulatory authorities do not consider that cryptocurrencies are "money" or "currency" for tax purposes. Therefore, the use of cryptocurrencies in purchasing or selling goods or services is considered a barter transaction, where "two persons agree to a reciprocal exchange of goods or services and carry out that exchange usually without using money".
Estonia	***Unclear***	It remains unclear how cryptocurrencies are taxed in Estonia, considering the ruling from the European Union.
European Union	***Foreign currency tax***	The European Court of Justice ruled that cryptocurrencies should be treated as foreign currencies, thus exempt from Value Added Tax. As the ruling is issued by a highest-resort court, it should be mandatory for all member states.
Hong Kong	***Income tax***	Regardless of whether the crypto holder is a corporation or individual, income tax applies for profits derived in Hong Kong. No capital gains tax.
Japan	***Miscellaneous income tax***	Not the same as foreign currency/stocks and the tax payable depends on the taxpayer's income (ranges from 15-55%). No tax payable if the taxpayer receives no income and cryptocurrency profits were less than ¥200,000 (about US$1,857).
Singapore	***Business: Income tax Individual: No tax***	Businesses that choose to accept virtual currencies such as Bitcoin for their remuneration or revenue are subject to normal income tax rules. They will be taxed on the income derived from or received in Singapore. Tax deductions will be allowed, where permissible, under Singapore law.
South Korea	***On its way***	Currently no tax, although the South Korean government has confirmed it is working on taxation plans for both cryptocurrencies and ICO's.
Switzerland	***Foreign currency tax***	Holders of cryptocurrencies are subject to a progressive wealth tax. If receiving cryptocurrency as a salary or benefit, it is subject to income tax. If cryptocurrency trading is done on a professional basis, any profits are taxable and losses are tax deductible. No capital gains tax.
Taiwan	***Unclear***	There is currently no expressed interpretation or regulation governing the taxation of Bitcoin or other cryptocurrencies in Taiwan.
United Kingdom	***Foreign currency tax***	Corporation tax: cryptocurrencies are subject to the general rules of foreign exchange and loan relationships and profits or losses on exchange movements are taxable. Income tax: profits and losses on cryptocurrency transactions must be reported in a non-incorporated company's accounts and are taxable under normal income tax rules.
USA	***Property tax***	For federal tax purposes, convertible cryptocurrencies are treated as property and subject to the same taxation rules that apply to other property. Convertible cryptocurrencies are those that have an equivalent value in real currency, or which can act as a substitute for real currency, such as Bitcoin. There are no tax principles that apply to other cryptocurrencies.
Tax Exempt	***N/A***	100% tax exempt countries: Belarus, Denmark, Italy, Portugal, South Korea, Slovenia, the Netherlands and the US states of Wyoming, Arizona and Georgia.