مركـــز قطـــر للمـــال
Qatar Financial Centre

Digital Assets Regime Overview, Lab and Journey

Contents

QFC's Digital Assets Vision

1

The national vision aims to **transform Qatar into a leading global financial and commercial capital by 2030**, capable of sustaining its own development, with **digital transformation and fostering innovation** being one of the priorities.

In addition, **QCB's Fintech Strategy 2023** will further support innovation in financial services, complementing the national vision while cementing Qatar's position as a Fintech hub.

2

QFC's mission is to **drive economic development** and **diversification** by providing a world-class, commercial, legal and regulatory environment.

3

QFCA & QFCRA are jointly developing a digital assets regime that will provide **legal certainty** and a **trusted environment** for the legal recognition of digital assets.

QFC is establishing the **Digital Assets Lab** to encourage innovation and collaboration in commercialising digital assets services with support from QCB, QDB, QFTH and other organisations.
It will also accelerate the digitalisation of Qatar's ecosystem, complementing QCB's Fintech Strategy.

What is Digital Asset & Tokenisation?

Digital Asset

A Digital Asset is a digital representation of a property right (referred to as the underlying). When an underlying is represented by a Token, the underlying is referred to as being tokenised.

Tokenization

Tokenization refers to the process of creating a token on a DLT that represents an asset. These tokens can be representations of traditional tangible assets (such as real estate, agricultural or commodities), financial assets (equities, bonds), or intangible assets.

Dematerialised / Physical Assets Today

- **Electronic documentation**
- **Bonds / Sukuk**
- **Sports / fan token**
- **Private company shares**
- **Physical assets**
- **Sustainable assets** (i.e. Carbon Markets Ecosystem)

Fractionalisation — Fraction (e.g., a third of an original asset)

Tokenisation — Assets are issued as tokens (programmable assets) on the network based on smart contracts

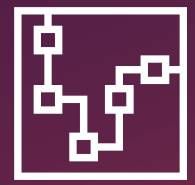
Smart Contracts — Self-executing contract with the terms of the agreement within the lines of the code

Distributed Ledger Technology (DLT)

Client wallets

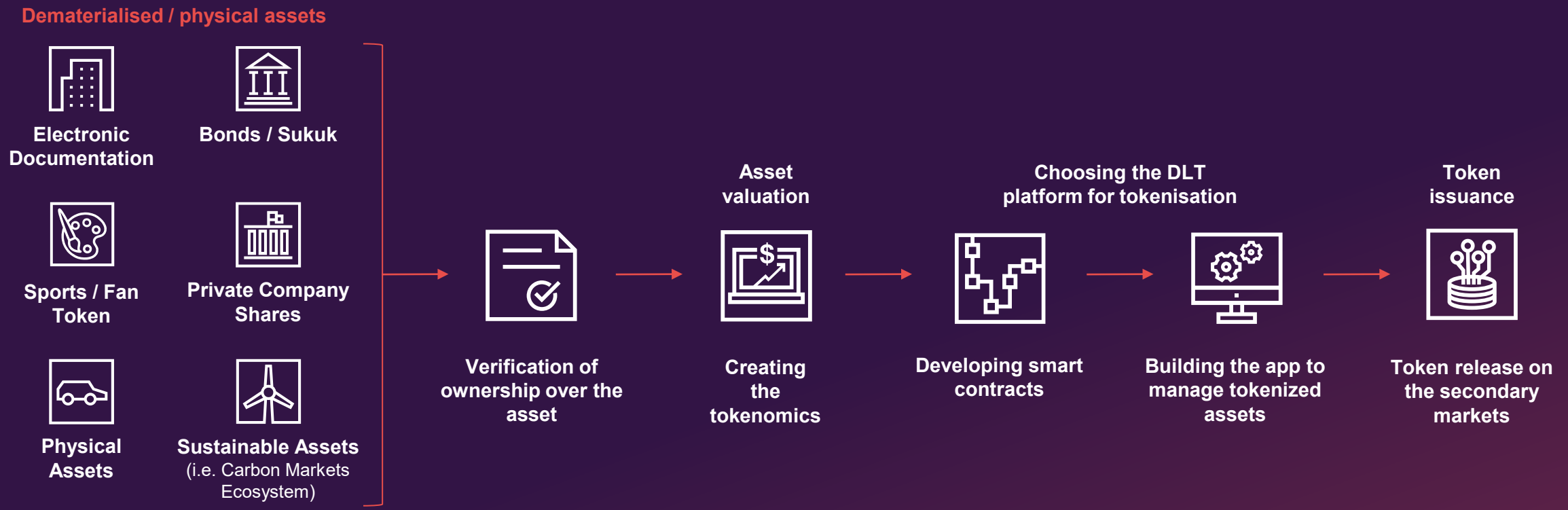
Keys that sign transactions

The foundational technology!



A High-level Overview of the Tokenisation Journey

There is more than one way to create a Digital Assets token, but no matter what, it should be simple, intuitive, and transparent.



Tokenization Explained…

Tokenisation is like turning something valuable you own, let's say a property, into a special digital ticket that you can trade or shared with others. This ticket, called a token, represents your portion of the property and can be easily passed around, just like a digital gift card. People can use this token to show they own a part of your property, and they can even trade it with others for something else they like.

Overview of QFC's Digital Assets Regulation

Regulation will underpin the sustainable growth of Qatar's Digital Assets Regime. Here are a few highlights from the Regulation in relation to Permitted Tokens and Token Services. Definitions of some key terms are provided in the Appendix.

01 **What is a Digital Asset?**
A Digital Asset (also referred to as a token) is a digital representation of a property right (referred to as the underlying). When an underlying is represented by a token, the underlying is referred to as being tokenised.

02 **What is a Permitted Token?**
Permitted Tokens are Digital Assets which are permitted in the QFC. Permitted Tokens may also include, but are not limited to, tokens that represent electronic money, fiat currencies or any token that allows the holder to acquire goods and services.

03 **What is a Token Service?**
A Token Service means any of the following services carried on in relation to a Permitted Token:

1. Validation;
2. Token generation;
3. Token custody services;
4. Operating a token exchange; and
5. Token transfer services.

04 **What is a Token Service Provider (TSP)?**
A TSP is a firm that has the relevant Licence and Authorisation to conduct Token Services.

05 **What Licences and Authorisations are firms required to perform QFC Token Services?**

Regulated activity: Token Services conducted in relation to Investment Tokens (Tokens representing specified products, derivatives or rights derived from an Islamic financial contract) are regulated. Such activities require Authorisation from the QFCRA. This is in addition to a Licence from the QFCA.

Unregulated activity: Token Services conducted in relation to tokens other than Investment Tokens are unregulated activities. These require a Licence from the QFCA only.

06 **What is the Digital Assets Regulation (Regulation)?**
The Regulation governs Permitted Tokens, any transactions involving Permitted Tokens and the provision of Token Services.

07 **Who does the Regulation apply to?**
The Regulation applies to all TSPs.

08 **What does the Regulation exclude from the Digital Assets Regime?**
The Regulation excludes any token that does not represent an underlying right to property e.g., cryptocurrencies.

Value Proposition for Tokenising Digital Assets

The potential benefits for tokenising Digital Assets have been highlighted in the below:

Key Dimensions	Improving profitability and quality		Increasing transparency among parties	Reinventing products and processes
Capabilities	**Automation** Self-validating network + smart contracts enable auto execution of business rules.	**Control** Control at the individual data element level, maximum flexibility over what data is shared and how.	**Distributed** No single entity data ownership, consensus applied to transactions and shared access with no central point of failure.	**Decentralised, Autonomous** Transparent, predefined rules mean new ventures are created, providing autonomous products / services through decentralised models.
	Full Traceability Provenance and complete historical of all dew data is known.	**Security** Data can be encrypted and segregated at the data element level, while also enhancing overall data security.		**Enhanced Identity** A combination of capabilities with advancements in digital identity could increase confidence in, and improvement of security and management of data.
	Speed / Efficiency Can enable faster data transfer, streamline tasks to optimise process efficiency, particular where intermediaries have been removed.	**Evidence Tampering** Underlying mathematics and cryptography allow users with appropriate access to verify data has not been altered.	**Holistic View** Single source of truth - all stakeholders see the same information to which they have access.	**Digital Assets** Physical object with verified unique digital representation enable digital ownership, management and transfer.
Value Drivers	Auditability and Compliance	Ownership	Data Management and Security	Process Automation	Data Sharing	Resiliency	Authentication	Identity Management
	Payments	Standardisation	Reconciliation	Track & Trace	Transparency	Trust	Marketplace Creation	New / Enhanced Products and Partnerships

QFC Digital Assets Journey

1

Digital Assets Lab

To **foster and accelerate open innovation and collaboration** via proofs-of-concept and proofs-of-value.

– For (i) use cases tried and tested in other jurisdictions, and (ii) novel use cases relevant to Qatar

2

Pioneer Program

To enable **early commercialisation** under a limited licence.

– For use cases with ecosystem and market readiness in Qatar

3

Full License

To enable **full-scale** operations of digital assets related services.

- For high maturity use cases that have been licensed in Qatar

To be launched in early 2024

Digital Assets Lab

To **foster and accelerate open innovation and collaboration** via proofs-of-concept and proofs-of-value.

The objective of a Digital Assets Lab is to foster innovation, research, and development within the digital assets and DLT technology space.

It aims to provide a collaborative environment for startups, businesses, and researchers to explore and create innovative solutions, products, and services related to digital assets and distributed ledger technologies.

This lab seeks to position the Qatar as a hub for digital innovation, contribute to the growth of the digital economy, and drive the adoption of emerging technologies in various sectors.

Entry to the Digital Assets Lab is one of the pathways towards gaining a Full Licence.

Key Entry Criteria

- Products or services that match use case priorities or complement Qatar's ecosystem
- Track record in other jurisdictions
- Financial and commercial viability, and beneficial to Qatar's ecosystem

Benefits

- Access to Qatar's ecosystem (exposure to QFC register and fintech), digital assets products, and work with experts across the globe
- Leverage QFC's digital assets lab infrastructure and co-working space
- Regulatory insights and support to commercial establishment
- No specific fees and charges

Launch

- October 2023 for 1st wave of applications (following waves to be announced)

Duration

- 3-6 months for lab experiment

Expectations and Benefits for Lab Participants

Lab participants will have expectations placed upon them but will gain access to Qatar's Digital Assets ecosystem amongst other benefits.

Expectations

1 **Build and test** Proof-of-Concept and Proof-of-Value on use cases that complements Qatar's ecosystem

2 **Evaluate** use case benefits and market readiness with potential partners

3 **Assess** readiness for licensing and authorisation to commercialise digital assets use cases in Qatar

Key Benefits

Lab participants will be able to accelerate innovation of their digital assets products and enter Qatar's Digital Assets ecosystem.

1. Access to Qatar's Ecosystem

Support to fintech firms and corporates to introduce innovative digital assets use cases and explore partnerships to test and validate the same.

2. Lab Technology Support

Subject to case-by-case assessment, provision of technology and infrastructure for experimentation of use cases, e.g., cybersecurity advisory, cloud storage.

3. Operational Support

Provision of well-equipped, flexible co-working spaces with a dynamic and collaborative working environment for the duration of the Lab experiment free of charge.

4. Collaboration with Experts

Engage in the lab with experts from QFC and partners across the globe specialising in their respective fields, to help accelerate innovation and collaboration.

5. Regulatory Insights

Insight on applicable local regulatory requirements to obtain regulatory authorisation to conduct Digital Assets activities in Qatar.

6. Commercial Establishment

Support to obtain provisional registration and licence to accelerate progression to Pioneer Program or full licence upon subsequent launch in early 2024.

What Use Cases Can Be Experimented in the Lab?

The Digital Assets Lab is designed to foster a collaborative environment where diverse use cases and cutting-edge technologies can be explored, tested, and refined.

Innovation Challenge

Oct 2023 – Jan 2024

To be announced

1st Wave → **2nd Wave** → more to come… → **Nth Wave**

Use Cases in 1st Wave

#1 Carbon Markets Ecosystem

The Ecosystem leverages Distributed Ledger Technology (DLT) to tokenise carbon credits and create a transparent and decentralised marketplace. The platform facilitates the tokenisation, trading, and verification of carbon credits, promoting sustainability and supporting carbon offset initiatives.

#2 Private Company Shares Tokenisation

The process of DLT Private Company Shares tokenisation will involve the digitisation of shares for QFC firms through tokenisation, structuring the tokenised shares and then establishing a registry to track the tokens. An exchange will also be established to facilitate trading of the tokens.

#3 Bond/Sukuk Issuance & Tokenization

The tokenisation process involves converting the traditional financial instruments (e.g., bonds or Sukuk) into digital tokens on a DLT platform, representing ownership rights.
These tokens can then be securely issued, traded, and transferred, enabling fractional ownership and facilitating effective cross border transactions.

#4 Real Estate Tokenisation

The tokenisation of the real estate can leverage DLT to increase liquidity in a largely illiquid asset class, lowering barriers to entry for
retail investors and reducing transaction costs. It's ideal for Owners of a single asset or a small portfolio of assets, due to the significant reduction of time and cost in offering investors the right to participate in fractional ownership and subsequent secondary trading.

The 1st Wave of the Innovation Challenge Use Cases were selected for participants seeking to enter the Lab and serve as an initial framework for experimentation and exploration.

In looking forward, QFC acknowledges that the digital assets landscape is constantly evolving, and innovative solutions continue to emerge.

More details will be provided when the Digital Assets Lab announces a new wave of eligible Digital Assets Use Cases.

While these use cases offer a foundation to engage in digital assets activities, QFC encourages participants to propose additional use cases that align with your unique offerings and objectives.

Use Case 1: Carbon Markets Ecosystem

Launching your own voluntary carbon market & carbon credit tokenisation project.

Objective

To develop and test a DLT-powered platform that facilitates the tokenisation, trading and verification of carbon credits. QFC aims to collaborate with industry stakeholders to coordinate the advancement of digital utilities and platforms that enable the smooth and reliable flow of ESG data. These initiatives will play a crucial role in aiding financial institutions and businesses to channel capital towards sustainable projects, while also monitoring their commitments and evaluating the overall impact.

QFC will partner with domestic and international GreenTech providers and stakeholders to develop the network which will include a disclosure portal, registry, and a marketplace / exchange.

Who Can Apply?

Open to all companies.

Tokenisation Process

Carbon credit tokenisation involves the migration of information and features of carbon credits onto a DLT, where these credits are represented as tokens and can also be directly issued on DLT, with all associated attributes publicly accessible.

Each carbon credit corresponds to a carbon token, establishing a one-to-one relationship.

QFC's Role

Establish the rules for the Lab, establishing approvals, monitoring participation, intervening when there is non-compliance & commercial establishment. QFC will support the development of the ecosystem.

Use Case Overview

The Carbon Markets Ecosystem will be tested within the Lab environment to validate its functionality, efficiency, and potential impact on carbon offset initiatives. The tokenisation of carbon credits is aligned with the global linking of the currently fragmented carbon markets, and facilitates the cross-border movement of carbon credits; the interoperability of DLT protocols will enable tokens produced in different countries to be easily exchanged.

Carbon Market Ecosystem Stakeholders

1. Project Developers

Design Carbon offsets projects in consultation with stakeholders and sells carbon credits to buyers

2. Carbon Offset programs/schemes

Set standards for carbon credit quality, certify and issue carbon credits, and have a registry to track certified credit projects and credits issuance and retirement.

3. Carbon brokers / Retailers

Offer a range of credits and services that reduce time taken to engage directly with project developers.

4. Carbon Exchange

Carbon Marketplaces where verified credits are listed, bought & sold.

5. Carbon Credit Issuers

Entities that generate carbon credits through sustainability practices and emission reduction projects.

6. Carbon Credit Buyers

Individuals or organizations interested in offsetting their carbon emissions through purchasing carbon credits.

7. Independent Verifiers

Independent parties responsible for verifying the legitimacy and accuracy of carbon credits.

8. Platform Administrators

Oversee the operation and maintenance of the DLT-based platform.

Key Benefits

Increased trust

Fractional ownership

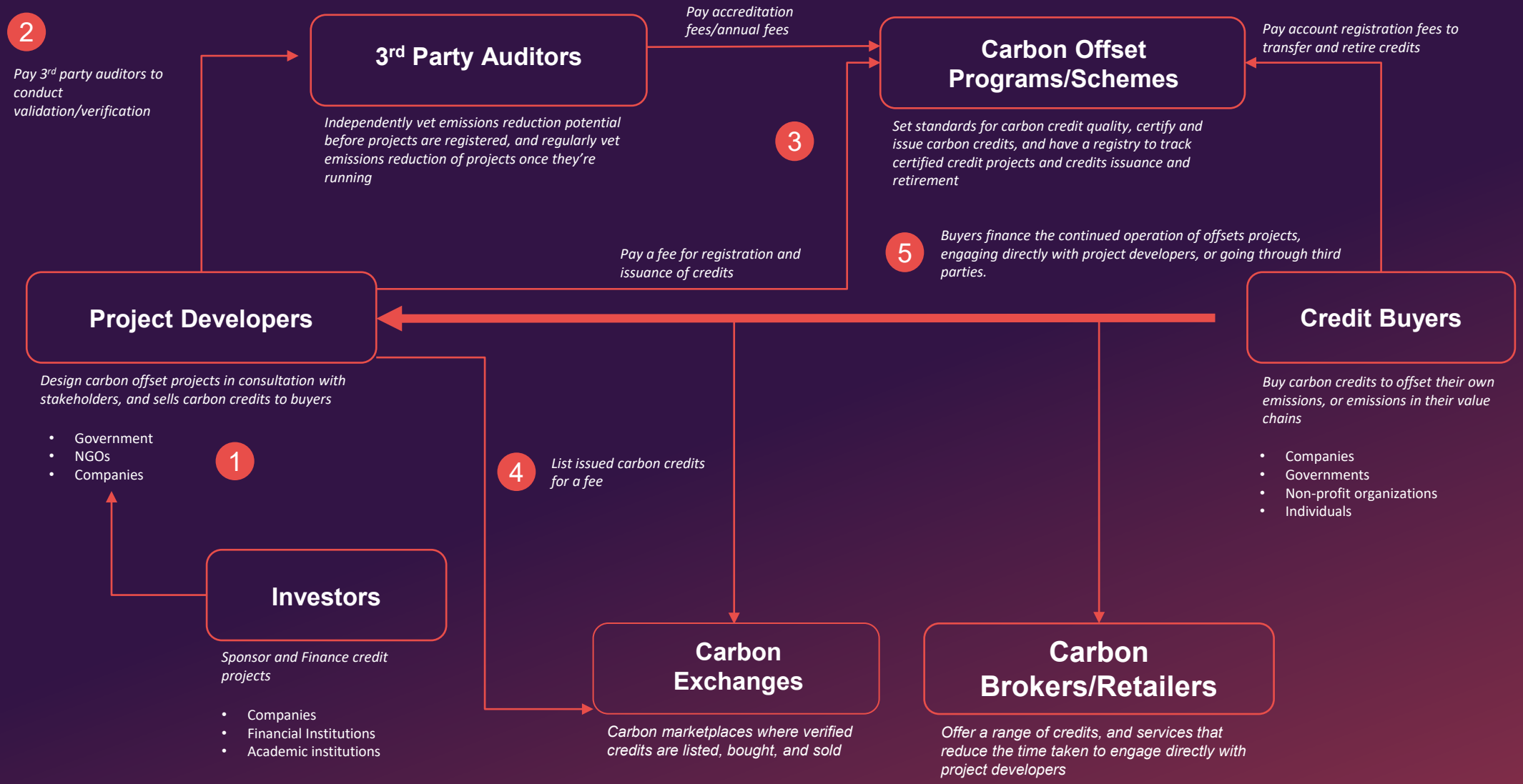
Direct transactions

Enhanced liquidity

Efficient compliance

Use Case 1: Carbon Markets Ecosystem

Launching your own voluntary carbon market & carbon credit tokenisation project.



Use Case 2: Private Company Shares Tokenisation

Launching your own private company shares tokenisation project.

Objective

To develop and test a DLT-powered platform that facilitates the tokenisation of private company shares, enabling fractional ownership, increasing liquidity, and facilitating efficient transfer of these in shares in a more accessible way.

Who Can Apply?

Open to all companies.

Tokenisation Process

The process will involve the digitisation of shares for QFC firms through tokenisation, structuring the tokenised shares and then establishing a registry to track the tokens. An exchange will also be established to facilitate trading of the tokens.

QFC's Role

Establish the rules for the Lab, establishing approvals, monitoring participation, intervening when there is non-compliance & commercial establishment. QFC will support the development of the ecosystem.

Use Case Overview

The tokenisation of private company shares presents an innovative way to modernise traditional securities markets and create new opportunities for both companies and investors. The use case will be tested within the Lab environment to validate its functionality, security, and potential benefits in democratizing private company shares. By enabling private companies to innovate by creating private company share tokens, companies can attract a more accessible global investor base and increase liquidity, thereby attracting more capital and investment into the company.

Private Equity Tokenisation Stakeholders

1. Private Company

The company seeking to tokenise its shares to enhance liquidity and access to capital.

2. Shareholders

Existing shareholders who participate in the tokenisation process and gain access to a more liquid market.

3. Investors

Accredited investors interested in trading tokenised shares and investing in the company.

4. Platform Administrators

Oversee the operation and maintenance of the DLT-based platform.

Key Benefits

Increased liquidity

Increased access

Reduction in fraud

Reduced costs

Increased traceability

Use Case 3: Bond and Sukuk Issuance & Tokenization

Launching your own digital bond and sukuk issuance & tokenization.

Objective

To digitise and transform traditional bond assets into DLT-based tokens, aiming to enhance liquidity, accessibility and transparency in the financial market.

Who Can Apply?

Open to all companies.

Tokenisation Process

The tokenisation process involves converting the traditional financial instruments (e.g., bonds or Sukuk) into digital tokens on a DLT platform, representing ownership rights. These tokens can then be securely issued, traded, and transferred, enabling fractional ownership and facilitating effective cross border transactions.

QFC's Role

Establish the rules for the Lab, establishing approvals, monitoring participation, intervening when there is non-compliance & commercial establishment. QFC will support the development of the ecosystem.

Use Case Overview

By tokenising bonds in Qatar, the Digital Assets Lab aims to make bond investment and Sukuk issuance more accessible to local and global investors. This initiative will enhance liquidity, reduce settlement times, and offer real-time tracking of ownership transfers.

Bond / Sukuk tokenisation stakeholders

1. Bond / Sukuk issuers

Government or corporations that are responsible for issuing traditional bonds and Sukuk that will be tokenised.

2. Investors

Investors, ranging from individuals to institutions, that engage in purchasing and trading tokenised bonds and Sukuk.

3. Financial intermediaries

Intermediaries such as banks and brokers that facilitate transactions and trading of tokenised bonds and Sukuk.

4. Platform Administrators

Oversee the operation and maintenance of the DLT-based platform.

Key Benefits

Transparency

Fractional ownership

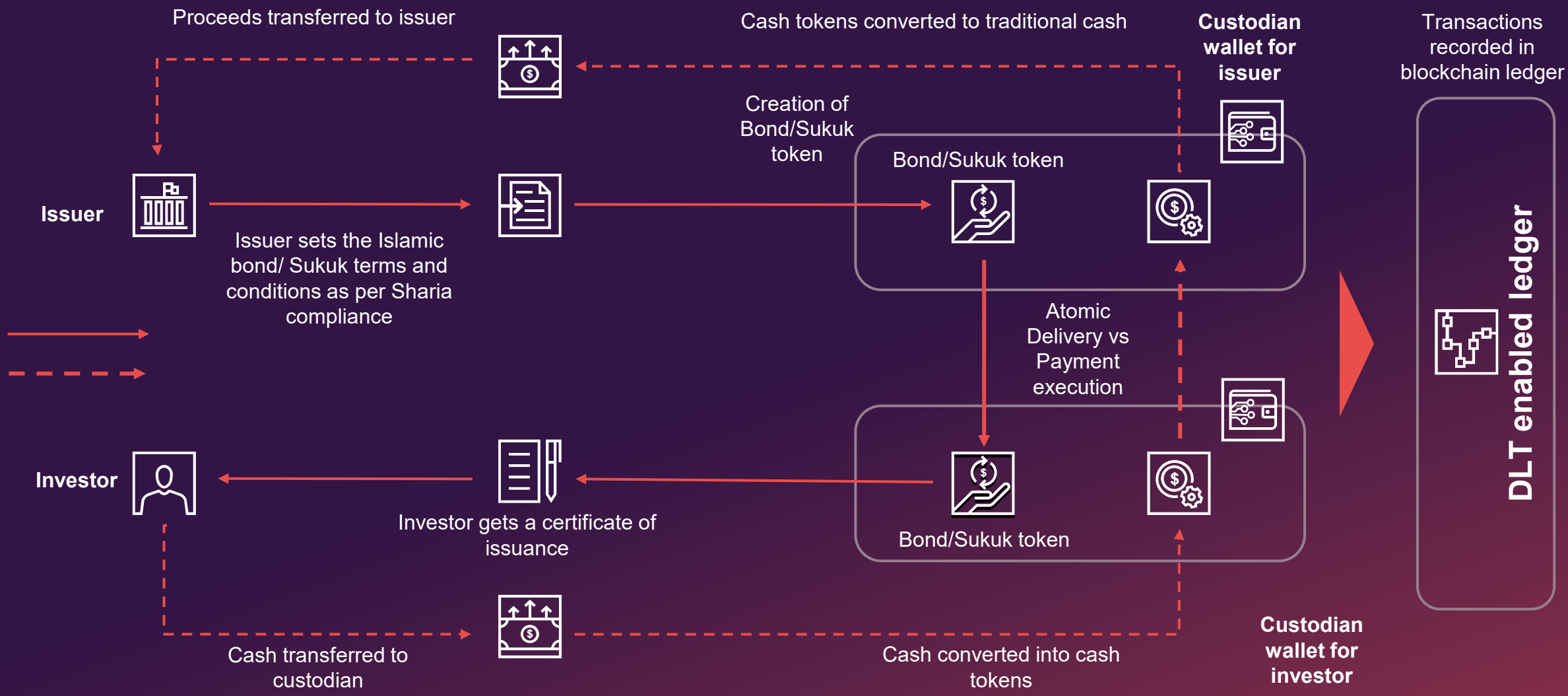
Accessibility

Enhanced liquidity

Efficient compliance

Use Case 3: Issuance and Tokenisation of Bond & Sukuk

Tentative process flow of tokenisation supporting issuance of Bond/Sukuk.



Use Case 4: Real Estate Tokenisation

Launching your own real estate tokenisation project.

Objective

To tokenise assets in the real estate sector has the potential to transform real estate investment by increasing liquidity in a largely illiquid asset class, lowering barriers to entry for retail investors and reducing transaction costs. Tokenisation is ideal for owners of a single asset or a small portfolio of assets, due to the significant reduction of time and cost in offering investors the right to participate in fractional ownership and subsequent secondary trading.

Who Can Apply?

Open to all companies.

Tokenisation Process

The tokenisation process involves identifying the appropriate property asset, determining the suitable DLT platform, creating the self-executing smart contract which defines the terms for the tokenisation, issuance, marketing and listing of tokens on exchanges. Managing tokens would then be necessary beyond listing on exchange step.

QFC's Role

Establish the rules for the Lab, establishing approvals, monitoring participation, intervening when there is non-compliance & commercial establishment. QFC will support the development of the ecosystem.

Use Case Overview

At its core, tokenisation involves fragmenting an asset into digital tokens, each representing a fraction of the underlying property. By breaking down expensive properties into smaller, more affordable units, tokenisation opens real estate investment to a wider range of potential buyers. DLT through tokenisation serves as the backbone of the process, providing a secure and transparent platform for storing and transferring tokens. Smart contracts can be used to defined the contractual specifics and automatically execute transfers when certain conditions are met.

Real estate tokenisation stakeholders

1. Property Owners

Are the ones that own the real estate assets being tokenised.

2. Property Investors

Are the individuals who are interested in investing in tokenised real estate assets.

3. Property Lawyers

Are the lawyers that help draft and execute the legal documents necessary for executing the deal.

4. Banks / Financing

Are the ones who provide finance to property owners/investors.

Key Benefits

Enhanced trust and transparency

Fractional ownership of property asset

Reduced costs through eliminating intermediaries

Increased access to the property market

Reduce risk and fraud

Use Case 4: Real Estate Tokenisation

Use case for real estate tokenisation within the Digital Assets Lab.

Choosing the right platform to digitise and/or tokenise real estate:

Tokenisation		Distribution Management	
Structuring	**Digitisation**	**Primary Offering**	**Trading**
Objectives, T&Cs, fee structure, KYC, compliance etc.	Selection of protocol, design of smart contracts and registry	Creation of SPV, recording of fractional ownership, coding	Corporate actions, settlement of token transfer, secondary trading

Digital Assets Lab journey for tokenising real estate (for illustrative purposes only):

Digitisation of Property | **Tokenisation of Real Estate** | **Deployment & Launch**

Key Challenges *and Benefits*

Improved Liquidity and Tradability

Real Estate tokens can easily and securely be transferable by way of DLT, which will allow investors to diversify their portfolios, minimize risk and create liquidity in the market. ***The Digital Asset Lab can help foster innovation by providing a safe and secure space for incumbents to design, test and deploy their tokenisation solution.***

Increased Efficiency and Transparency

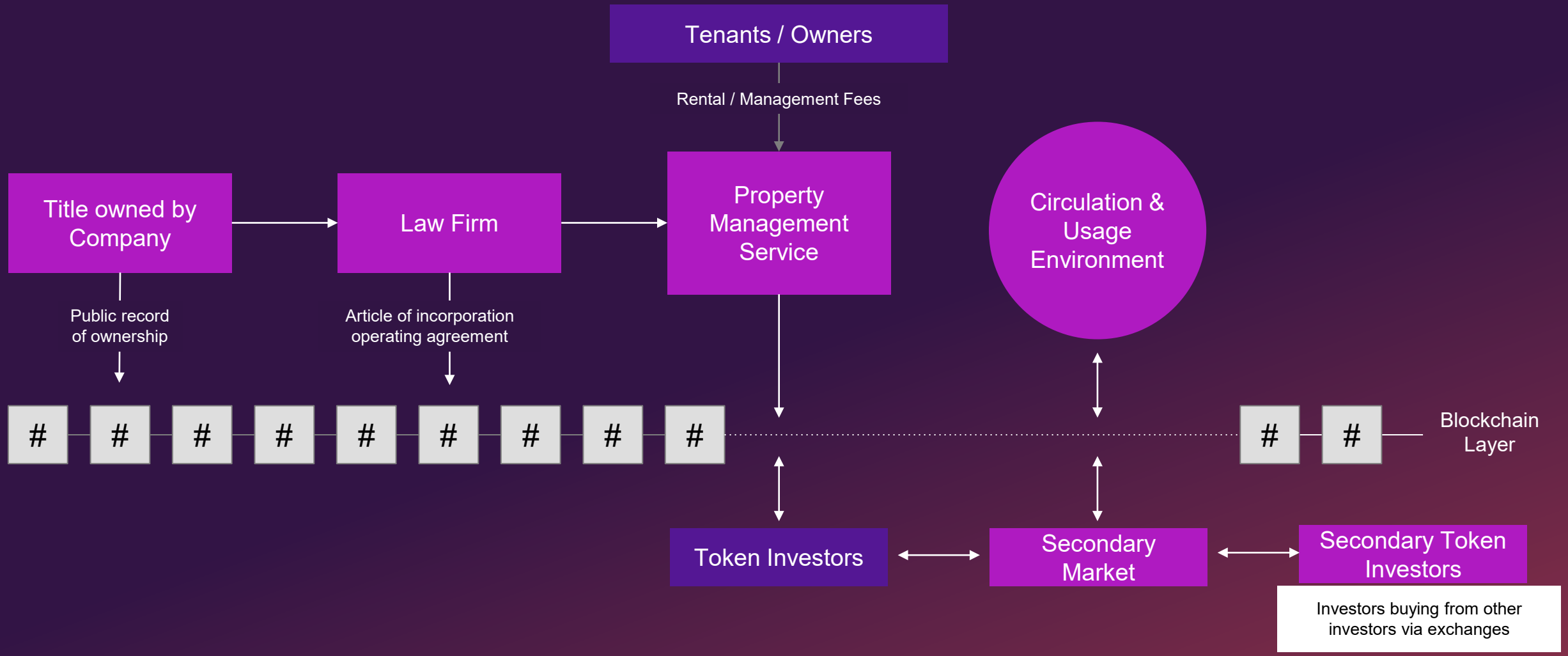
Tokensation can be used to create a more efficient and transparent system for Real Estate industry. All recorded transactions regarding property are protected by cryptography, a series of protocols that secure the network and transactions to ensure data privacy.
The Digital Asset Lab can help curate an environment to accelerate the innovation journey, bringing different stakeholders together.

Fractional Ownership

This allows investors to participate to invest because of increased access, lower investment amount, diversification, liquidity and transparency. ***Designing this feature in our Digital Assets Lab provides a safe environment to test the product, alongside regular feedback from the QFC will aid in building trust with future investors.***

Use Case 4: Real Estate Tokenisation

An illustrative process overview of real estate tokenisation.



Potential Lab Participants and Services

To lay the foundation for the digital assets use cases, fintech firms providing services required in the early stage of the digital assets lifecycle will be first invited to participate in Qatar's Digital Assets Journey. These services include validation, token generation, custody, exchange and transfer. Other services will also be required to support the ecosystem, such as External Assessors who will facilitate the licensing and authorisation processes.

On the overall, the digital assets journey will be open to all related service providers to participate in.

Token Services

1. Validation

Service of (a) confirming the owner of a right; and (b) issuing a certificate of validation to the person stating that fact so that the person may tokenise the right.

2. Token Generation

Service of generating token on a Distributed Ledger Technology (DLT) system on behalf of the owner of the underlying being tokenised.

3. Token Custody

Service of holding or controlling (a) tokens on behalf of clients; or (b) the means by which clients' tokens may be recorded and transacted on a DLT system.

4. Token Exchange

Service of operating (a) a facility that provides a market for trading tokens; or (b) a system which brings together multiple third party buying and selling interests in tokens.

5. Token Transfer

Services relating to the transfer of a token on **behalf** of another person other than the token services #1–4.

Ecosystem Support Services

1. Advisory

Services of providing personal recommendations to clients in respect of one or more actions or transactions relating to any tokens.

2. External Assessment

Services such as independent assessment or audit of token service providers in relation to applicable regulatory and licensing requirements.

3. Technology

Services such as self-custody wallet, blockchain foundation, or other technology services related to provision of token services and products.

4. Token Ancillary Technology Services

Services such as self-custody wallet, blockchain foundation, or other technology services related to provision of token services and products.

5. Compliance & Audit Service Providers

Services such as independent assessment or audit of token service providers in relation to applicable regulatory and licencing requirements

6. Other Services

Other services related to provision of token services, such as broker-dealer, borrowing and lending services.

Eligibility Criteria to Enter Digital Assets Lab

To be eligible for participation in the Lab, you will be evaluated against a set of criteria to ensure your products and services align with the objectives of QFC and the Lab. The eligibility criteria is summarised below.

1. Innovative Use Case

A compelling use case that demonstrates innovation and addresses a specific challenge within the use case domains.

2. Business Plan / White Paper

Details of the product's objectives, target market, risk / mitigation strategies, management team, measurement criteria, relevant timelines, revenue model, and implementation strategy.

3. Regulatory Compliance

Applicants must comply with all relevant regulatory requirements and will be subject to ongoing regulatory supervision and compliance monitoring.

4. Technical, architectural & infrastructure standards

Applicant's solutions should align with industry-leading technical, architectural and infrastructure standards that demonstrate robustness, scalability, and security.

5. Eligibility Verification

Applicants must validate their legal entity status, compliance with relevant regulations, and adherence to ethical business practices.

Please note that Lab applications will be subject to approval by the QFC, and fulfilment of the eligibility criteria does not automatically guarantee your participation in the Lab.

Click here to access the comprehensive eligibility criteria for the Lab.

Your Digital Assets Lab Journey

1 Lab Application

Your expression of interest to participate in the Lab can be initiated by completing the application form or by contacting our QFC FSO team on digitalassets@qfc.qa

Once the application is submitted, a member of our QFC team will get in contact in 1-2 weeks.

2 Lab Consultation

Our QFC team will meet with you to assess if your proposed products and services are suitable and ready for Lab experiment, and the applicable ecosystem and infrastructure support you may need.

You may also choose to apply for provisional company registration.

Once you satisfy all the requirements, your Lab application will be approved.

3 Lab Experiment

Once the application is approved, the applicable ecosystem, infrastructure and operational support will be made available to you.

You can then conduct the Lab experiment in Qatar for **3-6 months**.

[webpage to be launched soon]

4 Lab Evaluation

After the Lab experiment, you are required to submit a **Lab report** that summarises the experiment performed and associated outcome.

Our QFC team will evaluate the Lab report, and confirm if you are ready for commercialisation and licence application in Qatar.

Once approved, you may proceed to the next stage of Qatar's digital assets journey Pioneer Programme and Licensing – *to be launched in early 2024.*

Appendix

Recognising the Benefits from Across the Globe

Tokenisation, powered by DLT, has the potential to accelerate progress on one of the most pressing challenges facing the world today – reducing global wealth disparities. The enormous potential of this technology is evident to see by the different views of what other institutes and global bodies have published in this area.

The World Economic Forum estimates that up to **10% of global GDP will be stored and transacted via DLT by 2027** – tokenised markets could potentially be worth as much as **US$24 trillion by 2027**.

(Source: World Economic Forum, 2019)

Several leaders of large institutions have publicly voiced interest in tokenisations potential to transform capital markets. Analysts have forecast that **$4 trillion** to **$5 trillion** of **tokenised digital securities could be issued by 2030**.

(Source: McKinsey, August 2023)

Société Générale issued of a **EUR 100m covered bond as a security token**, directly registered on the Ethereum blockchain.

(Source: The Tokenisation of Assets and Potential Implications for Financial Markets OECD, 2020)

The global Tokenisation market is registering a **growth rate CAGR of 19.0%** from 2021 to 2026.
(Source: Markets & Markets, 2023)

The market for tokenised U.S. Treasuries has grown nearly **sixfold to $622 million** this year, as real-world assets on blockchains keeps growing.
(Source: XDC Network)

The case of the Nivaura ETH-denominated bond FinTech company Nivaura was the first company to execute a **tokenised security issuance** in the UK FCA Sandbox.

(Source: The Tokenisation of Assets and Potential Implications for Financial Markets OECD, 2020)

A Bank of America report said that the tokenisation of real-world assets creating blockchain-based tokens of traditional financial assets such as government bonds or private equity – could transform the financial infrastructure while Bernstein forecasted it could **grow a 5 trillion market** in the next five years.
(Source: XDC Network)

HSBC estimated that digital assets would represent **5 to 10% of global assets by 2030**.
(Source: UK Finance & Oliver Wyman)

"We expect DLT to achieve **adoption at scale in the capital markets**, and potentially **replace core market infrastructure**."
(Source: The 10x Potential of Tokenisation, HSBC 2023)

The EU estimated that widespread use of DLT in the EU could result in annual cost savings of up to **EUR 4 billion** in the area of reporting and "**several billion**" in the European derivatives market over time in relation to clearing, settlement, collateral management and other intermediary functions.

(Source: UK Finance & Oliver Wyman)

Siemens is one of the first companies in Germany to **issue a digital bond** (worth **60 million**), in accordance with Germany's Electronic Securities Act.

(Source: Siemens, 2023)

Registration, Licence and Authorisation Requirements

For all Digital Asset service providers, a **Company Registration and Commercial Trade Licence** will be approved by the **QFCA.**

For applicants seeking to perform **Token Services**, an **external assessment** will be required to assess the applicant's compliance with related regulatory requirements[1]. For Token Services related to **Investment Token**, **regulatory authorisation** from **QFCRA** will also be required.

Service Providers[2]	**Activities**[2]	**QFCA** *(Granting of Company Registration & Commercial Trade Licence)*	**QFCRA** *(Granting of Regulatory Authorisation)*	**External Assessment**[3] *(Assessment of the applicant's compliance with applicable regulations by an approved third-party assessor)*
TSP	**Regulated** (Token Services related to Investment Token)	**Yes**	**Yes**	**Required**
	Unregulated (Token Services not related to Investment Token)	**Yes**	**No**	
Ecosystem Support Services	**Unregulated (DNFBP)** (e.g., Auditor, Tax consultant or Insolvency practitioner)	**Yes**	**No** *(QFCRA will be involved for checking related to AML/CFT)*	**As Needed** *(As determined by QFCA & QFCRA)*
	Unregulated (non-DNFBP) (e.g., Advisory Services)	**Yes**	**No**	**Not Required**

Licensing and authorization can be further extended to include regulatory authorization by QCB for entities regulated by QCB.

Note (1): Requirements of the external assessment will be released together with the Pioneer Programme and Full Licence in 2024.
Note (2): Refer to Key Terms and Definitions for detailed definition of service providers and related activities.
Note (3): External Assessment will not be required for participation in the Digital Assets Lab.

Key Terms and Definitions

A list of key terms in the Digital Assets Regime.

Token	A Token is a cryptographically secured, digital representation of real or personal property rights (including contractual rights), which is issued, transferred and stored using distributed ledger technology or other similar technology. A right being represented by a Token, also known as the underlying, is referred to as being tokenised.
Permitted Token	Permitted Tokens are Tokens which are permitted in the QFC. Whether a Token is a Permitted Token is subject to specific requirements, as set out in the Digital Assets Regulation 2023. Furthermore, activities conducted in relation to Permitted Tokens can be either regulated or unregulated. This is subject to whether the activity is in relation to Investment Tokens (in which case it would be regulated).
Distributed Ledger Technology (DLT)	An information repository that keeps records of transactions and that is shared across, and synchronised between, a set of distributed network nodes using a consensus mechanism (such a ledger is enabled through technology).
Electronic money	Electronically or magnetically stored monetary value that is represented by a claim on an issuer of such value and is issued on receipt of funds for the purpose of making payment transactions.
TSP	A Token Service Provide (TSP) is an entity with the relevant licence and authorisation (if required) to provide Token Services (in relation to Permitted Tokens).
Token Services	TSPs can provide the following Token Services: validation, token generation, token custody services, operating a token exchange, and token transfer services.
Validation	The service of confirming that a person is the owner of a right capable of being represented by a token and issuing a certificate of validation.
Token generation	The service of generating a token on a DLT system on behalf of the owner of the underlying represented by the token, in accordance with any technology standards.
Token custody services	The service of holding or controlling tokens on behalf of clients, or holding or controlling the means by which clients' tokens may be recorded and transacted on a DLT system.
Operating a token exchange	Operating a system which brings together multiple third party buying and selling interests in tokens, in accordance with the system's non-discretionary rules, in a way that results in a contract in respect of the tokens.
Token transfer services	Token transfer services means providing services facilitating the transfer of a token to, or from, a person from, or to, a third party.
Technology standards	The Authority may set standards relating to DLT systems on which Permitted Tokens may be generated, stored and transferred.
Investment Token	Tokens representing specified products, derivatives or rights derived from an Islamic financial contract. Token Services conducted in relation to such tokens are regulated activities.
DNFBP	Designated non-financial business person as defined in rule 1.3.3 of the Anti-Money Laundering and Combating the Financing of Terrorism Rules 2019.

Contact us to learn more

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Digital Assets Lab