

Digital Asset Industry Classification System (DAICS[®])

Guiding Principles and Methodology

June 2023

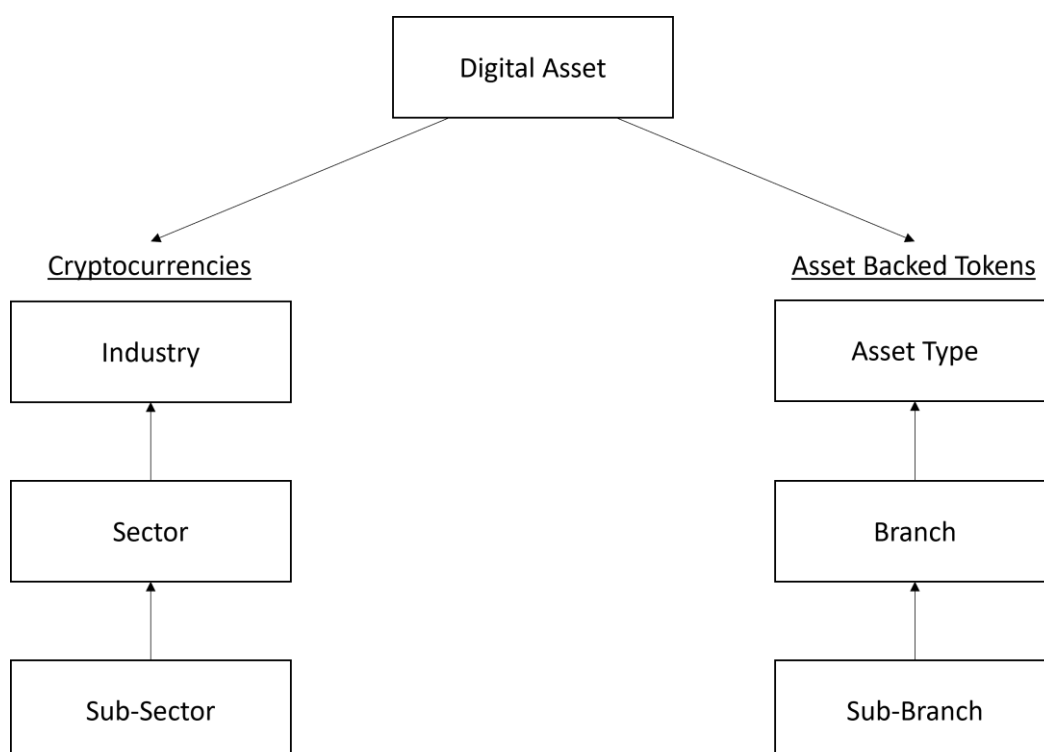
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1. Introduction

Overview

- 1.1. This document describes the general maintenance policies and detailed guidelines for the management of the IX Digital Asset Industry Classification System (DAICS®).
- 1.2. With increasing number of cryptocurrencies in the world¹, and majority of them traded in an unregulated environment, a classification system from a neutral party without interest shall help to give reliable and credible information to the market. It also helps to formulate the decentralised financial system in a sustainable way.
- 1.3. The DAICS® structure categorises digital assets into two categories, a) cryptocurrency or b) asset backed token (“ABT”). The cryptocurrency category is currently comprised of 5 industry sectors and 16 sub-sectors. The ABT category is comprised of 6 asset types and 31 branches (“Appendix 1”).
- 1.4. It is expected in the future that sector and sub-sector under cryptocurrencies and asset branch and sub-branch under ABT will be further developed.



¹ According to IX Asia Indexes quarterly reviews, the number of cryptocurrencies in the world grow from 2,000+ in Q42018 to 25,999+ in Q2 2023.

What is a digital asset token

- 1.5. A digital asset token is defined as a token that can be transferred by blockchain in a decentralised system with characteristics of immutability and total transparency which anyone can be able to assess transaction record on the internet.

How to draw the line between cryptocurrency and asset back token

- 1.6. A digital token can either be a) cryptocurrency or b) asset backed token (“ABT”). A cryptocurrency is by nature intangible from surface to root. An ABT shall be supported by a tangible asset or a representation of a tangible asset in a defined and known exchange ratio between the ABT and the related asset.
- 1.7. The DAICS® was launched on 21 September 2022 and is the earliest digital asset industry classification system in Hong Kong. The top 50 digital assets are selected for inclusion in DAICS® according to IX Crypto Index Methodology first ranked by market capitalization followed by liquidity criteria. The number of digital assets covered by DAICS® will be reviewed and may increase when the top 50 digital assets fail to represent 80% or over of the total market capitalization.
- 1.8. IX Asia Indexes reserves the right to determine the most appropriate implementation method. Any modification to the DAICS® structure will be announced publicly with appropriate lead time prior to implementation.

Philosophy and Objectives of DAICS®

- 1.9. DAICS® aims to provide the professional worldwide with a transparent and standardized classification scheme to determine sector and exposure of digital assets. It also serves as a tool for asset allocation and portfolio analysis for digital assets market as well as product development.
- 1.10. DAICS® complements IX Asia Indexes, the index business arm of the IX Capital International, to develop their own competitive digital asset indexes and index products from a robust global standard.
- 1.11. Crypto assets that serve multiple purposes across different industries are classified based on the following principles: (1) the founding mission and vision of the ecosystem, (2) how it is most widely used nowadays.

- 1.12. The principles to classify cryptocurrency asset are based on its industry use case while for ABTs- the classification is based on its asset nature.
- 1.13. To ensure a fair and unbiased classification, IX Asia indexes shall do their best to communicate with the digital asset issuers relating to the classification result. Owners of digital assets who disagree with the classification can substantiate his or her view with supporting documents according to 1.10.
- 1.14. In the event where IX Asia Indexes and digital asset owners cannot reach a consensus, it will be referred to a special meeting of the IX Tokenization Advisory Committee (“TAC”). IX Asia Indexes Company reserves the right to make the final decision after discussion with the TAC.
- 1.15. IX Asia Indexes treats information about the DAICS® decision-making process as confidential including changes in classification and DAICS® structure. For digital asset that is listed on regulated exchanges and included in the classification, IX Asia Indexes considers changes and information relating to the classification are also potentially price sensitive.

2. Management Responsibility

IX Capital International Limited

- 2.1. IX Asia Indexes, the index business arm of IX Capital International, is responsible for all aspects of the Benchmark Administration including the development of the Benchmark and the Benchmark Methodology in accordance with the Principles for Financial Benchmarks issued by The Board of the International Organisation of Securities Commissions (IOSCO) in July 2013. IX Asia Indexes is committed to bring transparency to the market which is critical for the financial market to function in an open and orderly manner. The benchmark methodology focuses on systematic and rules-based approach to properly reflect the underlying market. IX Asia Indexes is responsible for the ongoing operation of the Benchmark Administration process, including taking appropriate contingency measures in the event of unavailability of inputs, market disruption or failure of critical infrastructure.
- 2.2. IX Asia Indexes is responsible for monitoring market evolutions and any special actions and make adjustments to the Index Methodology and DAICS®.
- 2.3. The DAICS® will be reviewed half yearly by the IX Asia Tokenisation Advisory Committee in June and December each year.
- 2.4. Any additions, changes or deletions of a sector or asset type or branch shall go through internal research and review procedure, followed by best efforts to communicate with affected asset owner and TAC before released to the public.

IX Asia Tokenisation Advisory Committee (“TAC”)

- 2.5. The IX Asia Tokenisation Advisory Committee (“TAC”) was officially established on 18th March 2022 with 5 members and expanded into 7 members on 15th August 2022. The establishment of the TAC is to help IX Asia Indexes to pursue the goal and vision to formulate a standard for global tokenization framework in a compliant and transparent way. The key role of the Advisory Committee is to formulate the guideline and reference for tokenization in terms of infrastructure, business financial stability, sustainability, internal control, and classification. The Advisory Committee is comprised of industry recognised leaders from blockchain consultancy, sustainable projects, and field in Art industry. For the full list of the TAC members, please refer to IX Indexes official website: <https://ix-index.com/tokenization-committee.html>

2.6. The TAC shall keep all information relating to classification discussion and changes in the structure of DAICS® confidential.

3. Classification and Definition

Classification

- 3.1. DAICS® covers both cryptocurrencies and asset-backed tokens. Under cryptocurrencies, it is a two-tier system that groups cryptocurrencies into 5 main industry sectors: 1) Payment, 2) Infrastructure, 3) Financial services, 4) Technology & Data and 5) Media & Entertainment. These industry sectors are further divided into 16 sub-sectors.
- 3.2. Under asset-backed tokens, there are 6 asset types. They are: 1) Culture, 2) Real Estate, 3) Financials, 4) Entertainment, 5) Natural Resources and 6) Green Economy. (For DAICS® please see Appendix 1)
- 3.3. In response to the common global effort to achieve net zero emission by 2030 and 2050 agenda for the 17 sustainable development goals (SDGs) by United Nations, IX Asia Indexes anticipates that more tokenisation will adopt the SDGs. Our vision is that ESG and sustainability is more than environmental impact, which also includes sustainable growth and development, good governance, better social impact, and community engagement. To promote this, the DAICS® introduces “**Green**” labelling for cryptocurrencies that adhere to the principle of sustainability by employing energy efficient protocol or making an active effort in minimising environmental damages. A letter “**G**” as ‘Green’ labelling will be given to the name of such digital asset after the classification review. On the ABT category, a branch of Green Economy is introduced to represent asset ownership of projects with 80% of the revenue or job creation from the 17 SDGs.
- 3.4. The TAC will improve the system from time to time and a risk management classification will be introduced when the classification system and coverage expand over time.

Definitions

- 3.5. A summary table of the definition is available at Appendix 2

4. Coverage of Classification

Universe Eligibility

- 4.1. In view of the fact that over 80% of the trading volume is covered by the top 25 cryptocurrencies (90.05% sourced from IX ASIA 2023 Q2 index review result presentation), the initial coverage of the classification system will be 1) only for cryptocurrency and 2) for the top 50 cryptocurrencies.
- 4.2. **Wrapped Cryptocurrency Treatment:** In cases where wrapped cryptocurrency(s) should be within top-50 cryptocurrencies, then the classification system will be for the top “50+N” cryptocurrencies, where “N” represents the number of wrapped cryptocurrencies within top-50.

Principles of Final Selection

- 4.3. Cryptocurrencies meeting all the below eligibility requirements will be considered for inclusion in the classification for the top 50 digital assets.

Eligible Cryptocurrencies

- 4.4. The top 50 eligible cryptocurrencies must be traded in at least 2 exchanges and have to meet the following market capitalization ranking and liquidity screen criteria.

Market Capitalization Ranking

- 4.5. The cryptocurrency should be among the top n% free float adjusted market capitalization (“adjusted MC”) where n represents the total percentage after including wrapped coins and last eligible cryptocurrency and such percentage is targeted to achieve over 80%.

Liquidity Screening

- 4.6. The cryptocurrency should rank within an acceptable range in accordance with the Volume Buffer Rule in terms of 90-day average trading volume. The acceptable range under the Volume Buffer Rule varies in accordance with the number of existing constituents, which is at least 2.5 times the number of existing constituents, rounded up in increment of 25.
- 4.7. If the cryptocurrency in top N in terms of adjusted MC cannot meet the liquidity requirement, it will be kicked off and replaced by the next one or more eligible cryptocurrencies until the total coverage exceed 80%.

Eligible Asset Backed tokens

- 4.8. As of today, when writing this paper, there is not yet a significant number of ABTs available in the public system, so the top digital assets selected to be classified under DAICS® will all be cryptocurrencies. IX Asia Indexes will monitor the evolution of the market from time to time and make recommendations to the TAC in half yearly meetings.
- 4.9. Tokens that represent asset is in general, expected to exist in the long term by its nature. Some exemptions may apply to the Financial.

Announcement and Effective Date

- 4.10. Classification review will be performed semi-annually following the 4th quarter and the 2nd quarter end of each year.
- 4.11. Announcement and effective dates of the classification changes will be half yearly before end of March and end of September each year.

5. Governance

- 5.1. IX Asia Indexes Advisory Committee (“IAC”) and the IX Tokenisation Committee (“TAC”)
The Advisory Committees shall review, endorse, and provide general comments on topics and matters presented by IX Asia Indexes at the quarterly committee meetings including:
- a) integrity and independence of IX Asia Indexes
 - b) measures and procedures in place to avoid conflicts of interests
 - c) audit reports and findings
 - d) proposed procedures to discontinue or to transition existing industry and sectors
 - e) complaint handling
 - f) integrity and reliability of data sources
 - g) change to the index methodologies
 - h) operation of IX Asia Indexes and related control
 - i) audit report
- 5.2. For urgent matters such as incident reports, IX Asia Indexes will present and provide resolutions, proposals, or options for Advisory Committee’s decision within a week.
- 5.3. The Advisory Committee shall provide comment to the future development of new Industry, industry sector, asset type, asset branch by their professional knowledge and experience.
- 5.4. The Advisory Committee shall handle other issues and decisions on an as-needed basis.
- 5.5. For a detailed overview of the Index Management Committee, please see Rules and Guidelines for IX Asia Index Committee.

6. Changes to the Classification

6.1. Although IX Asia Indexes Benchmarks are governed by a static set of rules that are set out in the relevant Index Methodology and are intended to be comprehensive and will refine/update the classification as the digital industry matures/develops. It is possible that ambiguities, errors and omissions may exist. In such circumstances, IX Asia Indexes shall follow procedures, which it considers are appropriate and proportionate to the amount and type of Benchmark Linked Products referencing the relevant Benchmark.

In summary, the procedures involve three phases: discovery, planning and execution.

- **Discovery:** IX Asia Indexes will endeavour to resolve such ambiguity, error or in consultation with the Advisory Committee, propose amendments to the DAICS[®] Methodology to reflect the resolution of such ambiguity, error, or omission. In so doing, IX Asia Indexes shall assess the potential impact such change may have on Stakeholders.
 - **Planning:** IX Asia Indexes in consultation with the Advisory Committee (TAC) shall consider (i) the potential impact on Stakeholders; (ii) whether a change to a Benchmark (including, without limitation, a change to the composition, data inputs or calculation methodology) is necessary to ensure that the Benchmark continues to be fit-for-purpose; and (iii) any feedback received from Stakeholders (as may be deemed appropriate) prior to implementation.
 - **Execution:** IX Asia Indexes shall be responsible for overseeing and shall consult, as necessary, with the Advisory Committee on all three phases of the process and shall consult with the Advisory Committee regarding any proposed amendment to the relevant Index Methodology and may liaise with other teams within IX Asia Indexes with regard to obtaining Stakeholder feedback.
- 6.2. Advisory Committee approval is required in connection with any material change. For these purposes, a “material change” shall mean a significant or fundamental change to a Benchmark Methodology, which the Administrator, in its sole discretion, determines would cause the relevant Benchmark to no longer be consistent with its primary objective and/or cause the underlying constituents or Interest referenced by the relevant Benchmark to no longer be represented by the relevant Benchmark in the manner originally intended.
- 6.3. Following approval of the Advisory Committee in connection with a proposed material change, IX Asia Indexes shall seek to notify Stakeholders of its determination to amend the DAICS[®] Methodology. Such notification shall explain the reason for any such change and shall be communicated to Stakeholders where reasonably possible along with the relevant amended and restated DAICS[®] Methodology.

7. Basic Terminologies

7.1. Consensus mechanisms

7.1.1. Proof of Work (PoW): Requires prover to solve an arbitrary mathematical puzzle to verifiers to validate transactions and mining new tokens. It consumes substantial energy.

7.1.2. Proof of Stake (PoS): Requires verifiers to validate block transactions based on the number of coins they hold. The process consumes less energy than PoW.

- Nominated Proof of Stake (NPoS): selecting validators to be allowed to participate in consensus protocol
- Delegated Proof of Stake (DPoS): users spend their coins to vote for various delegates, who will be making critical decisions for the network
- Pure Proof of Stake (PPoS): when a node is selected, nobody but them knows about it, which preserves from corruption by preventing compromise
- Liquid Proof of Stake (LPoS): allow holders to loan their validation rights to other users without relinquishing ownership of their tokens
- Secure Proof of Stake (SPoS): improved variation of PoS that ensures long term security and distributed fairness

7.1.3. Proof of History (PoH): Mechanism creates a historical record to try to justify that an event did indeed ensue. The technology enables more events to happen at a quicker speed.

7.1.4. Proof of Coverage (PoC): verification of network connectivity and location of hotspots through perks of radiofrequencies.

7.2. Layers

Sidechain	Sidechains are their own blockchains, connected to the mainchain. Key difference from layer – 2 blockchain is that it doesn't inherit security structure of other base chain
Layer – 3	D-Apps
Layer – 2	Supplementary protocol/sidechain, that builds on top of existing blockchain. It serves as auxiliary framework for processing commands/transactions, reducing the stress on base layer
Layer – 1	Foundation layer of every blockchain network serves as infrastructure for other protocols, apps and networks on which to build
Layer – 0	Multi-chain networks that link all other protocols to create interlinked value chains. It is designed to be solutions to L-1 limitations: including scalability, usability, and interoperability without modifying existing protocols of blockchain

7.3. Other terminologies

7.3.1. Smart contract: Digitise agreements/contracts by turning terms of an agreement into computer code that automatically executes when the contract terms are met.

7.3.2. Hard fork: Permanent divergence to the protocol (i.e. an old and new version), that are not compatible with each other.

7.4. Oracle problem: without oracles, DeFi projects would have to rely only on the information available within their network.

8. Data File and Dissemination

8.1. Classification information on DAICS® can be obtained from:

- (a) Website: <http://ix-index.com/daics.html>
- (b) Contact IX Asia Indexes on daics@ix-index.com

9. Contact Information

9.1. IX Capital International Limited

Address: Core E-Units 2, Level 4, Cyberport 3, 100 Cyberport Road, Hong Kong

Website: www.ix-index.com

E-mail: info@ix-index.com

10. Disclaimer

All information contained herein is provided for reference only. IX Asia Indexes ensures the accuracy and reliability of the above information to the best of its endeavours.

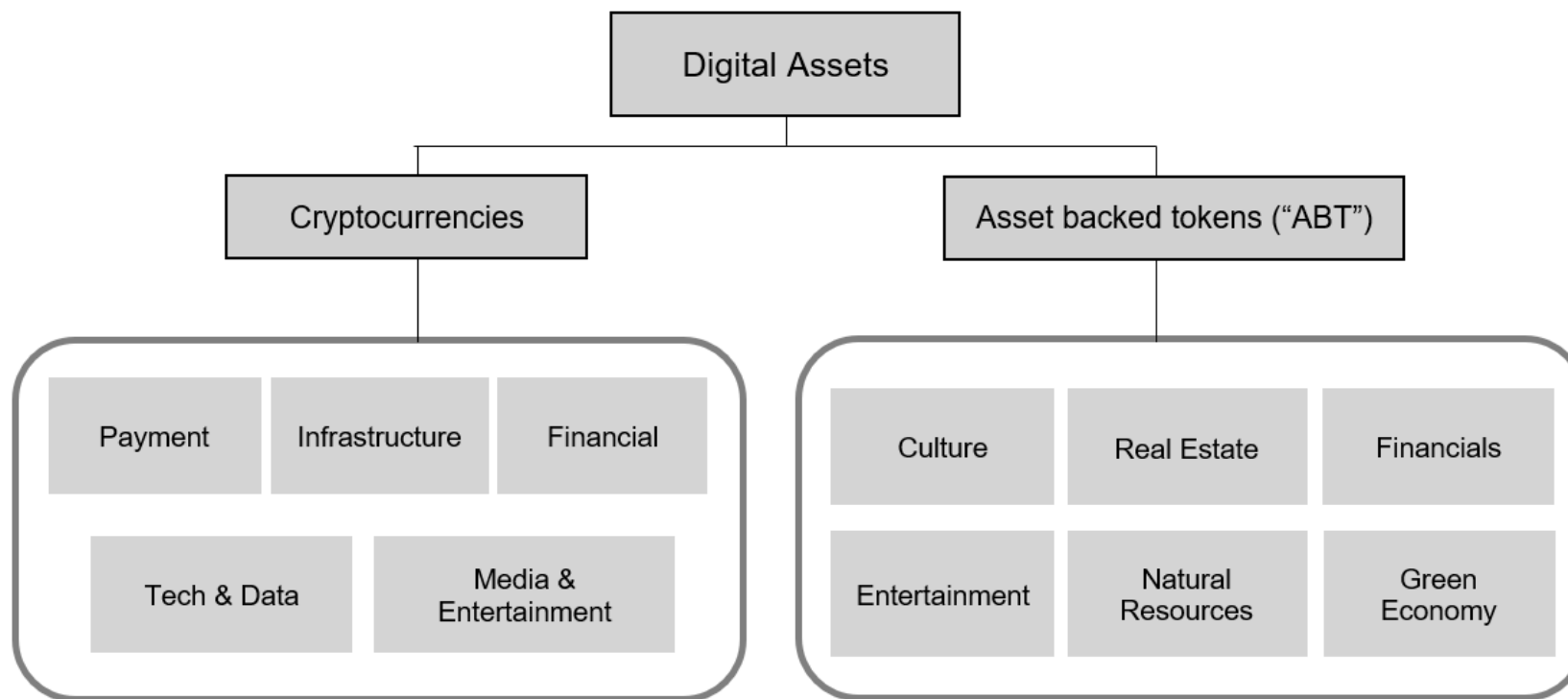
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Appendix 1

IX Digital Asset Industry Classification System (“DAICS”)



Appendix 2

IX Digital Asset Industry Classification System (“DAICS®”)

Category	Industry	Sector	Sector definition
Cryptocurrencies (1)	Payment: (110)	Transaction & Payment (11010)	<ul style="list-style-type: none"> Cryptocurrencies that are used for store of value, unit of account, medium of exchange
	Definition Blockchain based money, designed for transactional purposes. This includes daily transactions usage and stablecoins.	Stablecoin (11020)	<ul style="list-style-type: none"> Cryptocurrencies where price is pegged to a / a basket of reference asset
		Infrastructure: (120)	Application Development Protocol and Smart Contract (12010)
	Definition Bedrock blockchain that facilitates the operation of other decentralised applications. This includes the creation and running of dedicated blockchain platforms, achieving interoperability between networks, increasing the amount or speed of transactions etc.	Interoperability (12020)	<ul style="list-style-type: none"> Network that increases inter-connectivity and integration of the fragmented cryptocurrency ecosystem
		Scaling & Sharding (12030)	<ul style="list-style-type: none"> Networks that increase the ability to cope with the influx of many transactions at a time and blockchain network that can be split into smaller partitions, to improve scalability and process transactions quicker
	Financial services: (130)	Supporting System (12040)	<ul style="list-style-type: none"> Networks/sidechains that improve functionality of layer-1 network
		Exchange Tokens (13010)	<ul style="list-style-type: none"> Cryptocurrencies that represent the stable coin in the exchange ecosystem

<p>Definition Tokens that provide on-chain asset management services, crypto-exchange services, funding, lending, and other capital markets related services</p>		and allow users to convert from digital asset on decentralised or centralised system into fiat currencies
	Lending and Borrowing (13020)	<ul style="list-style-type: none"> Borrowing and lending crypto assets with interest in return and other secondary financial tools derived from primary underlying asset, such as crypto futures and options
	Staking ^(NEW) (13030)	<ul style="list-style-type: none"> Facilitate the staking of their cryptocurrencies for various blockchain applications
<p>Tech & Data: (140)</p> <p>Definition Provision of data management and storage, and development of innovative crypto technology</p>	File storage & Sharing (14010)	<ul style="list-style-type: none"> Cryptos that provide decentralised filing storage services and sharing
	Data Management ^(NEW) (14020)	<ul style="list-style-type: none"> Facilitate the indexing and querying of data from blockchain enabling efficient data retrieval and management
	Artificial Intelligence ^(NEW) (14030)	<ul style="list-style-type: none"> Facilitate the use of AI powered apps or projects directly using blockchain platform
<p>Media & Entertainment: (150)</p> <p>Definition Recreational and media services. Including content creation and distribution, advertising through crypto-asset incentive mechanisms, gaming and collectibles</p>	Social Media (15010)	<ul style="list-style-type: none"> Cryptos that provides mass social community and followers without a close secondary industry sector
	Streaming (15020)	<ul style="list-style-type: none"> Cryptos that provides rights to access decentralised video-streaming sites
	Gaming (15030)	<ul style="list-style-type: none"> Cryptos which mainly used in gaming or gaming supporting industry
	Metaverse (15040)	<ul style="list-style-type: none"> Cryptos that is commonly used in collective virtual open space, created by

			the convergence of virtually enhanced physical and digital reality. This includes the use of VR and/or AR and/or 3D.
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Index:

XXX^(NEW) : means new addition as of 1st Half 2023 Review

Category	Asset Type	Branch	Sub-branch
Asset backed tokens (2)	Culture: (205) Definition Real asset relating to sports, art, cultural drama, festive collectibles and design IPs etc.	Art (20510)	This shall be further developed in the future with more digital assets available in the market
		Sports (20520)	
		Festive Collectibles (20530)	
		Design IPs (20540)	
		Drama, and Play IPs (20550)	
	Real Estate: (215) Definition Assets that mainly derived its valuation from property, real estate, and land.	Commercial Property (21510)	
		Residential Property (21520)	
		Governmental Property (21530)	
		Residential and Commercial Land (21540)	
	Financials: (235) Definition Real financial asset including listed company shareholdings on regulated centralised exchanges and private company shareholdings; debt instruments; property trusts and	Tokenised Securities (Company securities, ETF) (23510)	
		Tokenised Debts (23520)	
		Tokenised REITs (23530)	

	<p>derivatives that settled on regulated exchange financial product underlings.</p>		
	<p>Entertainment: (255)</p> <p>Definition Ownership of the IPs assets in the area of entertainment in real world such as concert, play, shows, circus, musicals, songs, movies, events and programs, and souvenir collectibles that is derived from the above areas.</p>	<p>Movies (25510)</p> <p>Songs (25520)</p> <p>Concerts (25530)</p> <p>Gaming ^(NEW) (25540)</p> <p>All other Entertainment Events (25550)</p>	
	<p>Natural Resources: (265)</p> <p>Definition Natural resources asset that derived directly from sea, sky, atmosphere and underground and can be classified as a commodity with standardisation such as precious metals, agricultural, energy and metals.</p>	<p>Precious Metals (26510)</p> <p>Agricultural (26520)</p> <p>Energy (26530)</p> <p>Metals (26540)</p>	
	<p>Green Economy (275)</p> <p>Definition Ownership of Projects Asset that falls under the definition of the UN 17SDG²s, with over 80% of the income or jobs provided on these 17 initiatives.</p>	<p>No Poverty & Zero Hunger (27510)</p> <p>Good Health and Well-Being (27520)</p> <p>Quality Education (27530)</p> <p>Gender Equality (27540)</p>	

		Clean Water and Sanitation/ Affordable And Clean Energy (27550)	Following definition of the United Nations 17 sustainable development goals ²
		Decent Work and Economic Growth/ Industry, Innovation, and Infrastructure/ Partnerships for the Goals (27560)	
		Reduced inequalities/ Peace, Justice and Strong Institutions (27570)	
		Sustainable Cities and Communities/ Responsible Consumption and Production (27580)	
		Climate Action (27590)	
		Life Below Water & Life on Land (27500)	

² United Nations 17 sustainable development goals covering 1) No Poverty 2) Zero Hunger 3) Good Health and Well-Being 4) Quality Education 5) Gender Equality 6) Clean Water and Sanitation 7) Affordable And Clean Energy 8) Decent Work and Economic Growth 9) Industry, Innovation and Infrastructure 10) Reduced inequalities 11) Sustainable Cities and Communities 12) Responsible Consumption and Production 13) Climate Action 14) Life Below Water 15) Life on Land 16) Peace, Justice and Strong Institutions and 17) Partnerships for the Goals <https://sdgs.un.org/goals>