

White paper for crypto-assets other than asset-referenced tokens or e-money tokens

Digital Token Identifier: TWTKP3B6W
Offeror or person seeking admission to trading: 6367009JTS73D5NH6087 - FutureChain AB
Type of submission: New

Table of content

[General information](#)

[SUMMARY](#)

[Part A - Information about offeror or person seeking admission to trading](#)

[Part B - Information about issuer, if different from offeror or person seeking admission to trading](#)

[Part C - Information about the operator of the trading platform in cases where it draws up the crypto-asset white paper and information about other persons drawing the crypto-asset white paper pursuant to Article 6\(1\), second subparagraph, of Regulation \(EU\) 2023/1114](#)

[Part D - Information about other token project](#)

[Part E - Information about offer to public of other tokens or their admission to trading](#)

[Part F - Information about other tokens](#)

[Part G - Information on rights and obligations attached to other tokens](#)

[Part H – Information on underlying technology](#)

[Part I - Information on risks](#)

[Part J - Information on the sustainability indicators in relation to adverse impact on the climate and other environment-related adverse impacts](#)

[Table 2] Template for white papers for crypto-assets other than asset-referenced tokens or e-money tokens

Template for white papers for crypto-assets other than asset-referenced tokens or e-money tokens [abstract]

General information

00 Table of content
01 Date of notification
02 Statement in accordance with Article 6(3) of Regulation (EU) 2023/1114
03 Compliance statement in accordance with Article 6(6) of Regulation (EU) 2023/1114
04 Statement in accordance with Article 6(5), points (a), (b), (c), of Regulation (EU) 2023/1114
05 Statement in accordance with Article 6(5), point (d), of Regulation (EU) 2023/1114
06 Statement in accordance with Article 6(5), points (e) and (f), of Regulation (EU) 2023/1114

<i>boolean true</i>	true
<i>date</i>	2026-06-02
<i>boolean true</i>	This crypto-asset white paper has not been approved by any competent authority in any Member State of the European Union. The offeror of the crypto-asset is solely responsible for the content of this crypto-asset white paper.
<i>boolean true</i>	This crypto-asset white paper complies with Title II of Regulation (EU) 2023/1114 of the European Parliament and of the Council and, to the best of the knowledge of the management body, the information presented in the crypto-asset white paper is fair, clear and not misleading and the crypto-asset white paper makes no omission likely to affect its import.
<i>boolean true</i>	The crypto-asset referred to in this crypto-asset white paper may lose its value in part or in full, may not always be transferable and may not be liquid
<i>boolean true</i>	The utility token referred to in this white paper may not be exchangeable against the good or service promised in this white paper, especially in the case of a failure or discontinuation of the crypto-asset project.
<i>boolean true</i>	The crypto-asset referred to in this white paper is not covered by the investor compensation schemes under Directive 97/9/EC of the European Parliament and of the Council or the deposit guarantee schemes under Directive 2014/49/EU of the European Parliament and of the Council.

SUMMARY

07 Warning in accordance with Article 6(7), second subparagraph, of Regulation (EU) 2023/1114

<i>boolean true</i>	Warning
	This summary should be read as an introduction to the crypto-asset white paper.
	The prospective holder should base any decision to purchase this crypto –asset on the content of the crypto-asset white paper as a whole and not on the summary alone.
	The offer to the public of this crypto-asset does not constitute an offer or solicitation to purchase financial instruments and any such offer or solicitation can be made only by means of a prospectus or other offer documents pursuant to the applicable national law.

08 Characteristics of the crypto-asset

textBlock

This crypto-asset white paper does not constitute a prospectus as referred to in Regulation (EU) 2017/1129 of the European Parliament and of the Council or any other offer document pursuant to Union or national law.

FutureChain Token (FTC) is a utility token classified under MiCA Article 3(1)(5). FTC operates on the FutureChain blockchain, a compliance-first infrastructure built for regulated financial institutions.

Key characteristics:

- Token name: FutureChain Token (FTC)
- Total supply: 1,000,000,000 FTC (one billion)
- Smallest unit: 1 satoshi (0.00000001 FTC), 8 decimal places
- Issuance: Exclusively through Proof of Work mining rewards
- Transaction model: UTXO (Unspent Transaction Output)
- Consensus: Proof of Work (SHA-256 double hash)
- Block time: 15 seconds
- Finality: ~100 confirmations (~25 minutes)
- Transaction fees: 0.1% of amount (minimum 0.00002 FTC, maximum 0.1 FTC)
- Fee distribution: 75% to miners, 25% to treasury

FTC is NOT an E-Money Token (does not reference an official currency) and NOT an Asset-Referenced Token (does not reference other assets or values). FTC serves as the native utility token of the FutureChain network.

09 Further information about utility tokens

textBlock

FTC is a utility token that provides the following functions on the FutureChain network:

1. Transaction Fee Payment: FTC is used to pay transaction fees for processing payments on the FutureChain blockchain. Every transaction on the network requires a fee denominated in FTC.

2. Network Participation (Mining): FTC holders may participate in securing the network through Proof of Work mining. Miners who successfully validate blocks receive FTC as mining rewards.

3. Service Access: FTC enables access to FutureChain's compliance screening (Heimdall engine) and ISO 20022 PACS.008 payment integration services.

10 Key information about the offer to the public or admission to trading

Part A - Information about offeror or person seeking admission to trading

A.1 Name
A.2 Legal form
A.3 Registered address
Registered address
Country
Sub-division
A.4 Head office
Head office
Country
Sub-division
A.5 Registration date

The goods and services to which FTC provides access are currently operational. The FutureChain network has been in production since 2025, with 800,000+ blocks mined and demonstrated throughput of approximately 4.9 transactions per second steady-state with full compliance screening, up to approximately 110+ transactions per second peak burst. ISO 20022 PACS.008 messages are archived on Full and Archive node types; the chain has had native PACS.008.001.13 support since 2025.

FTC is offered to the public through Proof of Work mining and admission to trading is sought on MiCA-authorized crypto-asset trading platforms across the European Union.

Public offering: New FTC tokens are created exclusively as mining rewards. There is no direct sale by FutureChain AB. Any person with compatible mining hardware and software may participate.

Admission to trading: FutureChain AB intends to seek admission of FTC to trading on MiCA-authorized platforms, initially targeting Swedish platforms such as Safello. FTC may subsequently be admitted to trading on additional platforms across the EU.

There is no fundraising target, no subscription period, and no fixed issue price. FutureChain AB does not mainly raise funds through FTC distribution. The company's revenue model is based on B2B technology licensing.

textBlock

text	FutureChain AB
text	Aktiebolag (Swedish limited company)
text	Pastellvägen 9, 121 36 Johanneshov, Sweden
enumeration	Sweden
text	Stockholm
text	Pastellvägen 9, 121 36 Johanneshov, Sweden
enumeration	Sweden
text	Stockholm
date	2026-01-09

A.6 Legal entity identifier
A.7 Another identifier required pursuant to applicable national law
A.8 Contact telephone number
A.9 E-mail address
A.10 Response time (days)
A.11 Parent company
A.12 Members of the management body
Member #1
Identity
Business address
Function
Member #2
Identity
Business address
Function
A.13 Business activity
A.14 Parent company business activity
A.15 Newly established
A.16 Financial condition for the past three years
A.17 Financial condition since registration

LEI	6367009JTS73D5NH6087
text	559566-7572
text	+46 73 947 4576
text	daniel.bardun@gmail.com
integer	15
text	Not applicable. FutureChain AB has no parent company.
id	1
text	Daniel Bardun
text	Pastellvägen 9, 121 36 Johanneshov, Sweden
text	Chairman of the Board and CEO
id	2
text	Fredrik Cumlin
text	Bagarbyvägen 6, 191 34 Sollentuna, Sweden
text	Board Alternate (Suppleant)
textBlock	FutureChain AB is a blockchain infrastructure company that develops and licenses compliance-ready technology for regulated financial institutions. The company operates as a B2B technology licensor, providing: - Annual licensing fees based on transaction volume - Implementation and integration services - Ongoing support and compliance updates FutureChain AB does not operate as a crypto-asset service provider (CASP). Target customers include banks, payment service providers, electronic money institutions, central banks, and MiCA-authorized CASPs.
textBlock	Not applicable. FutureChain AB has no parent company.
boolean	true
textBlock	Not applicable. FutureChain AB was incorporated in 2025 and has not completed three fiscal years.
textBlock	FutureChain AB is a newly established Swedish aktiebolag, incorporated in 2025. The company is in its pre-revenue phase, funded by founder capital. As of the date of this white paper, the company has no outstanding debt, no material liabilities, and no revenue from

Part B - Information about issuer, if different from offeror or person seeking admission to trading

B.1 Issuer different from offeror or person seeking admission to trading
B.2 Name
B.3 Legal form

B.4 Registered address

Registered address
Country
Sub-division

B.5 Head office

Head office
Country
Sub-division
B.6 Registration date
B.7 Legal entity identifier
B.8 Another identifier required pursuant to applicable national law
B.9 Parent company
B.10 Members of the management body
Member #1
Identity
Business address
Function
B.11 Business activity
B.12 Parent company business activity

Part C - Information about the operator of the trading platform in cases where it draws up the crypto-asset white paper and information about other persons drawing the crypto-asset white paper pursuant to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114

operations. Revenue generation is expected upon securing first B2B technology licensing agreements.

boolean

false

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

N/A

C.1 Name	N/A
C.2 Legal form	N/A
C.3 Registered address	
Registered address	N/A
Country	N/A
Sub-division	N/A
C.4 Head office	
Head office	N/A
Country	N/A
Sub-division	N/A
C.5 Registration date	N/A
C.6 Legal entity identifier	N/A
C.7 Another identifier required pursuant to applicable national law	N/A
C.8 Parent company	N/A
C.9 Reason for crypto-asset white paper preparation	N/A
C.10 Members of the management body	
Member #1	N/A
Identity	N/A
Business address	N/A
Function	N/A
C.11 Operator business activity	N/A
C.12 Parent company business activity	N/A
C.13 Other persons drawing up the crypto-asset white paper according to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114	N/A
C.14 Reason for drawing the white paper by persons referred to in Article 6(1), second subparagraph, of Regulation (EU) 2023/1114	N/A
Part D - Information about other token project	
D.1 Crypto-asset project name	text FutureChain

D.2 Crypto-asset name
D.3 Abbreviation
D.4 Crypto-asset project description
D.5 Details of all natural or legal persons involved in implementation of crypto-asset project
Person #1

text	FutureChain Token
text	FTC
textBlock	FutureChain is a compliance-first blockchain infrastructure designed to solve the fundamental incompatibility between blockchain technology and financial regulatory requirements. Traditional blockchains process transactions first and check compliance later; FutureChain inverts this model by routing every transaction through a mandatory compliance gateway (the Heimdall engine) before it can enter the blockchain. Key innovations (patent pending, Swedish PRV): 1. Pre-Transaction Compliance (Heimdall): A mandatory compliance gateway, enforced at the protocol level above block 360,000, screens every transaction before blockchain inclusion. Country-jurisdiction screening and sanctioned-wallet-address screening are in active enforcement (transactions are blocked); the remaining controls operate in shadow mode (log and alert) and are promoted to active enforcement under a documented graduation policy. Transactions without a valid compliance-node signature are refused at the gateway. 2. Two-Tier Storage: On-chain hashes + encrypted off-chain ISO 20022 data. Achieves reduction in storage reduction while preserving full regulatory data. GDPR-compatible. 3. Native ISO 20022: Built-in PACS.008.001.13 support enabling direct integration with existing banking systems. 4. Cryptographic Compliance Proofs: Every approved transaction carries an immutable compliance signature. Compliance-gateway signatures use a hybrid scheme combining classical Ed25519 with FALCON-512 (NIST FIPS 206 FN-DSA, post-quantum), making the compliance gate quantum-safe. Production status: Rust code, 800,000+ blocks mined, approximately 110 transactions per second depending on workload, >99.9% uptime. A public RPC endpoint (https://rpc.futurechain.eu) and a mainnet-isolated public testnet are operational.
id	1

Type of person
Name of person
Business address of person
Domicile of company
Person #2
Type of person
Name of person
Business address of person
Domicile of company
D.6 Utility token classification
D.7 Key features of goods or services for utility token projects

D.8 Plans for the token

Description of past milestones

enumeration	Natural person
text	Daniel Bardun
text	Pastellvägen 9, 121 36 Johanneshov, Sweden
enumeration	Sweden
id	2
enumeration	Natural person
text	Fredrik Cumlin
text	Bagarbyvägen 6, 191 34 Sollentuna, Sweden
enumeration	Sweden
boolean	true
text	FTC provides access to the FutureChain network services: transaction fee payment for processing compliant cross-border payments, participation in Proof of Work mining to secure the network, and access to Heimdall compliance screening and ISO 20022 PACS.008 integration services.

textBlock	Phase 1 (Q4 2025 - Q1 2026) COMPLETE: - Core blockchain implementation in Rust - ISO 20022 PACS.008.001.13 native integration - Heimdall compliance engine integration - Two-tier storage architecture (on-chain + encrypted off-chain) - Multi-node production network deployment - HSM/PKCS#11 integration for hardware key protection - P2P TLS 1.3 enforcement on all node communications - SIEM stack deployment (Prometheus/Grafana/Loki/Alertmanager) Additional milestones COMPLETE (May 2026): - Post-quantum compliance signatures: hybrid Ed25519 + FALCON-512 (NIST FIPS 206 FN-DSA) shipped to mainnet; approximately 250 hybrid signatures proven in production - HSM-backed compliance signer registry (SoftHSM2 via PKCS#11) - Activation-height enforcement gate deployed at block 810,000 (dormant until the chain mines through that height), at which point hybrid compliance signatures become mandatory - Public testnet launched (Network ID 5777, mainnet-isolated, 5 hybrid compliance signers) - Bahnhof public RPC endpoint (https://rpc.futurechain.eu) with bearer authentication, rate limiting, and signed-challenge enrollment - ANTON (mobile) wallet with envelope v3 storage and Play Integrity
-----------	---

Description of future milestones
D.9 Resource allocation
D.10 Planned use of collected funds or other tokens

Part E - Information about offer to public of other tokens or their admission to trading

E.1 Public offering or admission to trading
E.2 Reasons for public offer or admission to trading

device attestation; ANTON (desktop); Anton Agent (desktop) with a Model Context Protocol server and a DESKTOP_V1 attestation primitive
Phase 2 (Q2 2026) IN PROGRESS: - MiCA white paper notification to Finansinspektionen (target submission: 2026-06-02) - DTI code registration with DTIF (anchor: mainnet genesis block; submission made May 2026; code assignment pending) - Big4 external security audit engagement (audit package prepared and ready; engagement letter pending) - Promotion of additional Heimdall controls from shadow to active enforcement under the documented graduation policy - First commercial B2B technology licensing agreement
Phase 3 (Q3-Q4 2026): - Full active-enforcement coverage across all Heimdall controls - External audit completion - First MiCA-authorised CASP admission to trading (target: Safello) - Cloud deployment templates (AWS, Azure, GCP) - Hardware wallet integration (Ledger, Trezor) - Additional ISO message types (PAIN.001)
Phase 4 (2027+): - Private network deployments for enterprise clients - Central bank integration pilots - On-chain governance implementation
Note: This roadmap is indicative and subject to change.
Development resources are funded by founder capital. Treasury receives 25% of block rewards and transaction fees for ongoing protocol development, security audits, and operations.
Treasury receives 25% of block rewards and transaction fees for ongoing protocol development, security audits, and operations.

Public offering and admission to trading
FTC is offered to the public and admission to trading is sought for the following reasons: 1. Network Security: FTC mining rewards incentivize participants to

E.3 Fundraising target

Target expressed in currency

Target expressed in units

Target expressed in digital token identifier

E.4 Minimum subscription goals

Goals expressed in currency

Goals expressed in units

Goals expressed in digital token identifier

E.5 Maximum subscription goals

Goals expressed in currency

Goals expressed in units

Goals expressed in digital token identifier

E.6 Oversubscription acceptance

E.7 Oversubscription allocation

Issue price details

E.8 Issue price

E.9 Official currency determining issue price

E.9 Any other tokens determining issue price

E.10 Subscription fee

Fee expressed in currency

Fee expressed in units

contribute computational resources to secure the FutureChain blockchain through Proof of Work consensus.

2. Network Utility: FTC serves as the transaction fee medium on the FutureChain network. A functioning token economy is essential for processing compliant cross-border payments.

3. Liquidity and Accessibility: Admission to trading on regulated platforms enables holders to acquire and dispose of FTC in a transparent, regulated environment with MiCA consumer protections.

4. Ecosystem Development: A distributed and liquid token supply is essential for the FutureChain ecosystem to serve regulated financial institutions across the European Union.

monetary0EUR

decimal0

textNot applicable - no fundraising through token sales

monetary0EUR

decimal0

textNot applicable

monetary0EUR

decimal0

textNot applicable

booleanfalse

textNot applicable. There is no subscription mechanism.

decimal0

enumeration

textNot applicable. FTC does not have a fixed issue price. New tokens are created as mining rewards.

monetaryEUR

decimal

Fee expressed in digital token identifier	text	
E.11 Offer price determination method	text	FTC does not have a fixed issue price. New tokens are created through Proof of Work mining. Market value, if any, will be determined by supply and demand on trading platforms.
E.12 Total number of offered or traded other tokens	integer	1000000000
E.13 Targeted holders	enumeration	All types of investors
E.14 Holder restrictions	text	No restrictions. Any person may acquire FTC through mining or trading, subject to applicable laws and Heimdall compliance screening.
E.15 Reimbursement notice	boolean true	
E.16 Refund mechanism	textBlock	
E.17 Refund timeline	text	
E.18 Offer phases	textBlock	
E.19 Early purchase discount	textBlock	
E.20 Time-limited offer	boolean	false
E.21 Subscription period beginning	date	
E.22 Subscription period end	date	
E.23 Safeguarding arrangements for offered funds or other tokens	textBlock	
E.24 Payment methods for other token purchase	textBlock	
E.25 Value transfer methods for reimbursement	textBlock	
E.26 Right of withdrawal	textBlock	FTC holders have a 14-day right of withdrawal from the date of purchase agreement, as provided under Article 13 of Regulation (EU) 2023/1114, where applicable to direct purchases. This right does not apply to FTC acquired through mining.
E.27 Transfer of purchased other tokens	textBlock	
E.28 Transfer time schedule	text	
E.29 Purchaser's technical requirements	textBlock	FTC holders need compatible wallet software to receive, hold, and transfer FTC. Compatible wallet applications include, for example, ANTON Pay (mobile, with envelope v3 encrypted storage and device attestation), ANTON Business (desktop), and Anton Agent Pay (desktop, exposing a Model Context Protocol server for AI-agent-initiated payments with a mandatory human confirmation step). Mining participants require compatible mining hardware and software. Wallet applications interact with the network through the public RPC endpoint

at <https://rpc.futurechain.eu>. Technical specifications are available at <https://futurechain.solutions>

Other token services provider characteristics

E.30 Other token service provider (CASP) name
E.31 CASP identifier
E.32 Placement form

Trading platforms characteristics

E.33 Trading platforms name
E.34 Trading platforms market identifier code (MIC)
E.35 Trading platforms access
E.36 Involved costs
E.37 Offer expenses
E.38 Conflicts of interest
E.39 Applicable law
E.40 Competent court

Part F - Information about other tokens

F.1 Crypto-asset type
F.2 Other token functionality
F.3 Planned application of functionalities

A description of the characteristics of the other token, including the data necessary for classification of the crypto-asset white paper in the register referred to in Article 109 of Regulation (EU) 2023/1114,

text

LEI
enumeration

text

text

text

textBlock

textBlock

textBlock

textBlock

textBlock

To be determined. FutureChain AB intends to seek admission on Swedish MiCA-authorized platforms such as Safello.
No conflicts of interest identified. FutureChain AB is the sole developer and does not operate trading platforms or provide brokerage services.
Laws of Sweden. Regulation (EU) 2023/1114 (MiCA).
Stockholms tingsrätt (Stockholm District Court), unless mandatory provisions of applicable law provide otherwise. For holders in other EU/EEA Member States, this is without prejudice to mandatory consumer protection provisions.

text

textBlock

textBlock

Utility token (Other crypto-asset under MiCA Article 3(1)(5))
FTC functions as: (1) transaction fee payment medium on the FutureChain network, (2) mining reward for Proof of Work network security, (3) service access token for Heimdall compliance screening and ISO 20022 integration services.
All three functionalities are currently operational. The FutureChain network has been in production since January 2025. Future planned functionalities include on-chain governance voting rights and expanded service access for enterprise API integrations.

**as specified in accordance with
paragraph 8 of that Article**

F.4 Type of crypto-asset white paper
F.5 Type of submission
F.6 Other token characteristics
F.7 Commercial name or trading name
F.8 Website of the issuer
F.9 Starting date of offer to the public or admission to trading
F.10 Publication date
F.11 Any other services provided by the issuer
F.12 Language or languages of white paper
F.13 Digital token identifier code used to uniquely identify the crypto-asset or each of the several crypto assets to which the white paper relates, where available
F.14 Functionally fungible group digital token identifier, where available
F.15 Voluntary data flag
F.16 Personal data flag

enumeration

enumeration

textBlock

text

text

date

date

textBlock

text

text

text

boolean

boolean

Other crypto-asset token white paper
New
FTC technical characteristics: - UTXO-based transaction model with Ed25519 digital signatures - Proof of Work consensus using SHA-256 double hash - 15-second target block time with adaptive difficulty (range 1-7, +/-1 per block) - 8 decimal places (smallest unit: 0.00000001 FTC) - Total supply cap: 1,000,000,000 FTC - Emission: Exponential decay from 50 FTC/block, asymptotically approaching total supply - Transaction fees: 0.1% of amount (min 0.00002 FTC, max 0.1 FTC) - Mandatory compliance gateway enforced at protocol level above block 360,000; gateway signatures use a hybrid Ed25519 + FALCON-512 (post-quantum) scheme - Pre-transaction compliance screening via Heimdall engine (22 chapters, 131 control codes) - Native ISO 20022 PACS.008.001.13 support with two-tier storage
FutureChain Token (FTC)
https://futurechain.solutions
2026-07-06
2026-07-06
FutureChain AB provides B2B technology licensing services to regulated financial institutions: annual licensing fees based on transaction volume, implementation and integration services, ongoing support and compliance updates.
English
TWTKP3B6W
B2SNQ5HD8
false
true

F.17 LEI eligibility
F.18 Home member state
F.19 Host member states #1
F.19 Host member states #2
F.19 Host member states #3
F.19 Host member states #4
F.19 Host member states #5
F.19 Host member states #6
F.19 Host member states #7
F.19 Host member states #8
F.19 Host member states #9
F.19 Host member states #10
F.19 Host member states #11
F.19 Host member states #12
F.19 Host member states #13
F.19 Host member states #14
F.19 Host member states #15
F.19 Host member states #16
F.19 Host member states #17
F.19 Host member states #18
F.19 Host member states #19
F.19 Host member states #20
F.19 Host member states #21
F.19 Host member states #22
F.19 Host member states #23
F.19 Host member states #24
F.19 Host member states #25
F.19 Host member states #26
F.19 Host member states #27
F.19 Host member states #28
F.19 Host member states #29

Part G - Information on rights and obligations attached to other tokens

<i>boolean</i>	true
<i>enumeration</i>	Sweden
<i>enumerationSet</i>	Austria
<i>enumerationSet</i>	Belgium
<i>enumerationSet</i>	Bulgaria
<i>enumerationSet</i>	Croatia
<i>enumerationSet</i>	Cyprus
<i>enumerationSet</i>	Czechia
<i>enumerationSet</i>	Denmark
<i>enumerationSet</i>	Estonia
<i>enumerationSet</i>	Finland
<i>enumerationSet</i>	France
<i>enumerationSet</i>	Germany
<i>enumerationSet</i>	Greece
<i>enumerationSet</i>	Hungary
<i>enumerationSet</i>	Iceland
<i>enumerationSet</i>	Ireland
<i>enumerationSet</i>	Italy
<i>enumerationSet</i>	Latvia
<i>enumerationSet</i>	Liechtenstein
<i>enumerationSet</i>	Lithuania
<i>enumerationSet</i>	Luxembourg
<i>enumerationSet</i>	Malta
<i>enumerationSet</i>	Netherlands
<i>enumerationSet</i>	Norway
<i>enumerationSet</i>	Poland
<i>enumerationSet</i>	Portugal
<i>enumerationSet</i>	Romania
<i>enumerationSet</i>	Slovakia
<i>enumerationSet</i>	Slovenia
<i>enumerationSet</i>	Spain

G.1 Purchaser rights and obligations	textBlock	Rights conferred by FTC: 1. Transaction Fee Payment: FTC is used to pay transaction fees on the FutureChain network. 2. Network Participation: FTC holders may participate in mining and transaction validation. 3. Service Access: FTC enables access to FutureChain compliance and ISO 20022 services. Obligations of FTC holders: 1. Key Security: Securing private keys; lost keys cannot be recovered. 2. Regulatory Compliance: Complying with applicable laws in their jurisdiction. 3. Tax Reporting: Reporting and paying any applicable taxes. 4. Transaction Verification: Verifying transaction details before signing. 5. Software Updates: Maintaining compatible wallet software. FTC does NOT confer: ownership in FutureChain AB, voting rights, dividend entitlement, redemption rights, guaranteed value, interest or yield, or collateral backing.
G.2 Exercise of rights and obligations	textBlock	Rights are exercised by holding FTC and interacting with the FutureChain network. No separate registration or approval is required beyond wallet creation. Mining participation requires compatible hardware and software. Service access is available to all FTC holders through the FutureChain network API.
G.3 Conditions for modifications of rights and obligations	textBlock	Protocol changes follow a governance process: (1) Improvement proposal submitted, (2) Minimum 10-day public discussion, (3) Code development and testing, (4) Validation on test network, (5) Flag day activation with advance notice. Protocol upgrades use activation-height gating: new logic is shipped to all node operators and activated at a predetermined future block height, giving validators a deterministic upgrade window (for example, hybrid compliance signatures become mandatory at block 810,000). White paper amendments are published on futurechain.solutions. Material changes are notified to Finansinspektionen at least 7 working days before taking effect.
G.4 Future public offers	textBlock	No future public offers of FTC are planned beyond the ongoing mining emission schedule. New FTC tokens are created exclusively through Proof of Work mining rewards according to the exponential decay emission schedule defined in the protocol.
G.5 Issuer retained other token	integer	0

G.6 Utility token classification
G.7 Key features of goods or services utility tokens
G.8 Utility tokens redemption
G.9 Non-trading request
G.10 Other tokens purchase or sale modalities
G.11 Other tokens transfer restrictions
G.12 Supply adjustment protocols
G.13 Supply adjustment mechanisms

Other token schemes details

G.14 Token value protection schemes
G.15 Token value protection schemes description
G.16 Compensation schemes
G.17 Compensation schemes description
G.18 Applicable law
G.19 Competent court

boolean	true
text	FTC provides access to: (1) transaction fee payment for compliant cross-border payments, (2) Proof of Work mining participation, (3) Heimdall compliance screening services, (4) ISO 20022 PACS.008 payment integration services.
text	Not applicable. FTC is not redeemable against specific goods or services from FutureChain AB. FTC utility is realized through network participation and service access on the FutureChain blockchain.
boolean	false
text	FTC may be acquired through Proof of Work mining or purchased on MiCA-authorized trading platforms where FTC is admitted to trading. FTC may be sold on such platforms or transferred directly between compatible wallet addresses.
text	FTC is freely transferable between compatible wallet addresses. Transfers are subject to Heimdall compliance screening. Transfers to sanctioned addresses are blocked. Transactions are irreversible once confirmed (~100 confirmations, ~25 minutes).
boolean	false
text	FTC supply is determined by Proof of Work mining only. The emission schedule is defined in the protocol (exponential decay from 50 FTC per block). There is no admin minting, no token burning, and no supply cap changes without protocol governance vote. Total supply asymptotically approaches 1,000,000,000 FTC.
boolean	false
textBlock	None. FTC has no value protection mechanism, no price peg, no reserves, and no buyback commitment by FutureChain AB. The market value of FTC, if any, is determined solely by supply and demand.
boolean	false
textBlock	None. FTC is not covered by any deposit guarantee scheme, investor compensation scheme, or similar protection mechanism in the European Union or elsewhere.
textBlock	This white paper and the FutureChain Token are governed by the laws of Sweden and Regulation (EU) 2023/1114 (MiCA).
textBlock	Stockholms tingsrätt (Stockholm District Court), unless mandatory provisions of applicable law provide otherwise. For holders resident in other EU/EEA Member States, this choice of jurisdiction is without

prejudice to mandatory consumer protection provisions or alternative dispute resolution mechanisms.

Part H – Information on underlying technology

H.1 Distributed ledger technology (DTL)
H.2 Protocols and technical standards
H.3 Technology used
H.4 Consensus mechanism
H.5 Incentive mechanisms and applicable fees
H.6 Use of distributed ledger technology

text

FutureChain blockchain - custom distributed ledger technology built in Rust

text

Rust 2021 (language), Tokio (async runtime), RocksDB (key-value storage), rustls with TLS 1.3 (networking), ISO 20022 PACS.008.001.13 (payment messaging), UTXO model (transaction model), SHA-256 double hash (Proof of Work)

textBlock

Technology stack:

- Language: Rust 2021 (memory safety, performance)
- Runtime: Tokio (high-performance async I/O)
- Storage: RocksDB (proven key-value store)
- Networking: rustls + TLS 1.3 (enforced on all P2P communications)
- Cryptography: Ed25519 (transaction signing), hybrid Ed25519 + FALCON-512 (NIST FIPS 206 FN-DSA, post-quantum) for compliance-gateway signatures, AES-256-GCM (data encryption), Argon2id / PBKDF2 (key derivation), SHA-256 (block hashing)
- Compliance signer registry: 30 signers, HSM-backed via SoftHSM2 / PKCS#11
- HSM: PKCS#11 support (SoftHSM2 verified, compatible with Thales Luna, AWS CloudHSM, Azure Key Vault)
- ISO 20022: Native PACS.008.001.13 with two-tier storage (on-chain hash + encrypted off-chain full message)
- Node types: Standard (mining), Full (90-day ISO store), Archive (unlimited ISO store)
- Public RPC: Bahnhof endpoint (<https://rpc.futurechain.eu>) behind a Caddy reverse proxy with Let's Encrypt TLS, bearer authentication, rate limiting, and signed-challenge enrollment

text

Proof of Work (SHA-256 double hash). Block time: 15 seconds. Difficulty adjustment: every block, +/-1 level max. Difficulty range: 1-7 (each level = 16x harder). Finality: ~100 confirmations (~25 minutes, probabilistic).

text

Mining rewards: Exponential decay starting at 50 FTC/block. Transaction fees: 0.1% of amount (min 0.00002 FTC, max 0.1 FTC). Fee distribution: 75% to miner, 25% to treasury for development and operations.

boolean

true

H.7 DLT functionality description

textBlock

FutureChain uses a custom distributed ledger with the following DLT-specific features: 1. Consensus: Proof of Work with SHA-256, providing permissionless network security 2. Two-Tier Storage: On-chain blockchain (~800 bytes/tx) + off-chain encrypted ISO 20022 store (5-15 KB/tx), achieving 99.5% on-chain storage reduction 3. Pre-mempool Compliance: A mandatory compliance gateway (enforced above block 360,000) screens transactions before blockchain admission; country-jurisdiction and sanctioned-wallet-address screening are actively enforced, with the remaining Heimdall controls in shadow mode under a graduation policy 4. P2P Network: Gossip protocol with mandatory TLS 1.3 encryption on all node communications 5. Cryptographic Compliance Proofs: Every approved transaction carries a compliance-node signature under a hybrid Ed25519 + FALCON-512 (post-quantum) scheme, creating immutable, quantum-safe audit evidence (legacy secp256k1 signatures from the pre-migration window remain verifiable for historical transactions) 6. GDPR Compatibility: Off-chain personal data can be deleted while on-chain hashes (non-personal data) remain immutable 7. Public RPC Access: A hardened public endpoint (https://rpc.futurechain.eu) lets partners and wallet applications interact with the chain without running a full node

H.8 Audit
H.9 Audit outcome

boolean

false
No external audit has been completed as of the date of this white paper. An engagement with a Big4 audit firm for external security testing is feasible for Q2 2026; the company has prepared a comprehensive audit package covering system architecture, source-code walkthrough, transaction flow, security-framework mapping (NIST / OWASP / ENISA / DORA), the compliance engine, internal penetration-test results, regression-test results, the open-network threat model, and the post-quantum hybrid-signature migration, together with four internal revalidations conducted in May 2026. Internal testing has covered penetration-test cases and regression tests passing.

textBlock

I.1 Offer-related risks

textBlock

Offer-related risks:

		- Price Volatility: FTC value may fluctuate significantly due to market conditions, speculation, or regulatory changes. Total loss of investment value is possible. - Limited Liquidity: FTC may not be listed on exchanges or may have limited trading volume, preventing sale at desired price or timing. - No Intrinsic Value: FTC has no underlying assets, revenue stream, or guaranteed utility. Value depends entirely on market demand. - Market Manipulation: Crypto markets may be subject to manipulation, wash trading, or coordinated activity.
I.2 Issuer-related risks	textBlock	Issuer-related risks: - Project Failure: FutureChain AB may fail to achieve its objectives or cease operations, resulting in reduced or no FTC utility. - Team Departure: Key personnel may leave the project, causing development slowdown or failure. - Funding Shortage: Insufficient funding may limit development, leading to incomplete or abandoned features. - Adoption Failure: Financial institutions may not adopt FutureChain technology, resulting in limited network utility. - Newly Established: FutureChain AB is a newly established company with no operating history or revenue.
I.3 Other tokens-related risks	textBlock	Crypto-asset-related risks: - No Guaranteed Value: FTC has no price peg, no reserves, and no value protection mechanism. - Not Covered by Compensation Schemes: FTC is not covered by any deposit guarantee, investor compensation, or similar scheme. - Irreversible Transactions: Blockchain transactions cannot be reversed once confirmed. Lost private keys cannot be recovered. - Key Loss: Private keys, if lost or stolen, result in permanent loss of all associated FTC. - Cryptographic Advances: Advances in cryptography (e.g., quantum computing) may weaken current security in the long term.
I.4 Project implementation-related risks	textBlock	Project implementation-related risks: - Competition: Competitors may develop superior technology, reducing FTC adoption and value. - Third-Party Dependencies: Reliance on external services (Heimdall compliance data providers) introduces operational dependencies. - Regulatory Changes: Future regulatory developments may restrict or prohibit FTC or impose additional compliance burdens.

I.5 Technology-related risks
I.6 Mitigation measures

Part J - Information on the sustainability indicators in relation to adverse impact on the climate and other environment-related adverse impacts

J.1 Adverse impacts on climate and other environment-related adverse impacts
--

textBlock

textBlock

textBlock

- Classification Changes: Regulators may reclassify FTC (e.g., as a security), imposing additional requirements. - Technology Evolution: Rapid changes in blockchain technology may render current architecture less competitive.
Technology-related risks: - Software Bugs: The FutureChain codebase (75,000+ lines of Rust) may contain undiscovered bugs or vulnerabilities, potentially causing loss of funds or network disruption. - Security Breaches: Despite multi-layer security measures, the network may be compromised by sophisticated attackers. - Consensus Attacks: 51% attacks or other consensus-level attacks may enable transaction reversals or double-spending. - Network Partition: Software incompatibilities may cause network splits, creating confusion and value dilution. - Mining Centralization: Mining power may concentrate in few hands, creating censorship or manipulation risks. - Scaling Limitations: The network may not scale to meet demand, causing congestion and high fees.
FutureChain AB implements the following risk mitigation measures: - Security: 7-layer defense architecture, mandatory TLS 1.3, HSM support, AES-256-GCM encryption, comprehensive audit logging - Compliance: Pre-transaction Heimdall screening across 22 areas and 131 control gates; country-jurisdiction and sanctioned-wallet-address screening are actively enforced, with the remaining controls in shadow mode under a documented graduation policy - Transparency: Open documentation, planned external security audit, regulatory engagement with Finansinspektionen - Development: Memory-safe Rust implementation, comprehensive test suite, continuous monitoring via Prometheus/Grafana/Loki stack - Patent Protection: Pending patent application with Swedish PRV covering core innovations

FutureChain uses Proof of Work (SHA-256), which requires computational energy. Over the reporting period (1 June 2025 to 2 June 2026, approximately 12 months), the network consumed approximately 8,784 kWh, well below the MiCA 500,000 kWh threshold

Mandatory information on principal adverse impacts on the climate and other environment-related adverse impacts of the consensus mechanism
General information about adverse impacts

S.1 Name
S.2 Relevant legal entity identifier
S.3 Name of the crypto-asset
S.4 Consensus mechanism
S.5 Incentive mechanisms and applicable fees
S.6 Beginning of period to which disclosed information relates
S.7 End of period to which disclosed information relates

Mandatory key indicator

S.8 Energy consumption

Sources and methodologies

S.9 Energy consumption sources and methodologies
--

Supplementary information on principal adverse impacts on climate and other environment-related adverse impacts of consensus mechanism
Supplementary key indicators

S.10 Renewable energy consumption
S.11 Energy intensity

for enhanced sustainability disclosure. Energy efficiency measures include 15-second block times (40x fewer blocks than Bitcoin), capped difficulty range, mandatory compliance validation preceding energy-intensive mining, and optimized Rust implementation.

text	FutureChain AB
text	6367009JTS73D5NH6087
text	FutureChain Token (FTC)
text	Proof of Work (SHA-256 double hash)
text	Mining rewards with exponential decay from 50 FTC/block. Transaction fees: 0.1% of amount. Fee distribution: 75% miner, 25% treasury.
date	2025-06-01
date	2026-06-02

energy (kWh)	8784
--------------	------

textBlock

Energy consumption is estimated based on the hardware power consumption of mining nodes at the current network hash rate, requiring approximately 1 kW of power. The reporting period runs from 1st June 2025 to 2nd of June 2026 (approximately 1 kW × 366 days × 24 hours = 8,784 kWh) = approximately 8,784 kWh. This estimate will be updated as the network scales. Efficiency measures: 15-second block times, difficulty capped at level 7, compliance validation precedes energy-intensive mining, optimized Rust implementation.

percent	
energy (kWh)	

S.12 Scope 1 DLT GHG emissions - controlled
S.13 Scope 2 DLT GHG emissions - purchased
S.14 GHG intensity

Sources and methodologies

S.15 Key energy sources and methodologies
S.16 Key GHG sources and methodologies

Optional information on principal adverse impacts on the climate and on other environment-related adverse impacts of the consensus mechanism

Optional indicators

S. 17 Energy mix

S.18 Energy use reduction

Energy use reduction target (absolute value)
Energy use reduction target (percentage)
S.19 Carbon intensity (kgCO2e/kWh)
S.20 Scope 3 DLT GHG emissions - value chain
S.21 GHG emissions reduction targets or commitments
S.22 Generation of waste electrical and electronic equipment (WEEE)
S.23 Non-recycled WEEE ratio
S.24 Generation of hazardous waste
S.25 Generation of waste (all types)
S.26 Non-recycled waste ratio (all types)
S.27 Waste intensity (all types)
S.28 Waste reduction targets or commitments (all types)

GHG emissions (tCO2e)	
GHG emissions (tCO2e)	
GHG emissions (tCO2e)	
textBlock	
textBlock	
percent	
energy (kWh)	
percent	
decimal	
GHG emissions (tCO2e)	
textBlock	
mass (tonnes)	
percent	
mass (tonnes)	
mass (tonnes)	
percent	
mass (tonnes)	
textBlock	

S.29 Impact of use of equipment on natural resources
S.30 Natural resources use reduction targets or commitments
S.31 Water use
S.32 Non recycled water ratio

Sources and methodologies

S.33 Other energy sources and methodologies
S.34 Other GHG sources and methodologies
S.35 Waste sources and methodologies
S.36 Natural resources sources and methodologies

textBlock	
textBlock	
volume (m3)	
percent	
textBlock	
textBlock	
textBlock	
textBlock	