WHITEPAPER

Project Name:	IoTeX
Token Name:	IOTX
Date of whitepaper issuance:	2025-10-05
Whitepaper version:	1.0
Whiter paper authors:	IoTeX Foundation

Table of Contents

I. Statements

Date of notification	2025-10-07
Statement in accordance with Article 6(3) of Regulation (EU) 2023/1114	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.
Compliance statement in accordance with Article 6(6) of Regulation (EU) 2023/1114	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.
Statement in accordance with Article 6(5), points (a), (b), (c), of Regulation (EU) 2023/1114	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.
Statement in accordance with Article 6(5), point (d), of Regulation (EU) 2023/1114	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.
Statement in accordance with Article 6(5), points (e) and (f), of Regulation (EU) 2023/1114	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.

II. Summary

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

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.

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.'

Characteristics of the crypto-asset

IOTX is a **crypto-asset other than an asset-referenced token or an e-money token (Title II, "OTHR")**. It is **not**classified under the narrow definition of a "utility token" in Article 3(1)(9) MiCA.

Core functions – native gas for the IoTeX Layer-1 blockchain; staking medium for Delegates and governance; burn mechanism to register devices and obtain ioID credentials; collateral for the Modular Security Pool (re-staking); optional settlement asset for DePIN Infrastructure Modules (DIMs) such as W3bstream, ioConnect, and ioDDK.

Supply dynamics – mild inflationary staking rewards balanced by protocol-level deflationary burns tied to network usage (e.g., EIP-1559-style gas burn, device registration burn).

Rewards are not investment returns. Any staking, restaking or liquidity incentives are **network/usage rewards** funded from protocol emission/treasury and may be **modified, paused or discontinued** at any time. They are **not linked to issuer revenues** and **do not** create dividend, profit-share or interest rights

No passive income. Holding IOTX **alone** does **not** entitle the holder to any passive income.

No ownership or redemption rights – holding IOTX does **not** give any claim on the Foundation, profits, or underlying assets; value is entirely market-driven.

Information about the quality and quantity of goods or services to which the utility tokens give access and restrictions on the transferability

Digital access rights – IOTX allows holders to:

- pay network fees and deploy smart contracts on the IoTeX L1 (≈1 000+ TPS Roll-DPoS);
- lock tokens to secure the network, DIMs, and vote in on-chain governance (veIOTX after 91-day lock);
- burn tokens to register devices (ioID) and obtain verifiable credentials, enabling participation in DePIN dApps;

- settle for modular services (data, compute, connectivity) provided by approved DIMs.

Quantity/quality – access is usage-based; there is no quota other than prevailing gas prices or service fees.

Transferability – IOTX is freely transferable on IoTeX and bridged EVM chains. Staked/re-staked amounts are subject to self-selected lock-ups; burned tokens are non-recoverable. No contractual right to redeem tokens for fiat or goods exists, and tokens may lose value or liquidity if the project fails.

Key information about the offer to the public

Nature of the offer – This document relates to the *admission to trading* of already-issued IOTX tokens within the European Economic Area; no new issuance or fundraising is conducted.

Total supply & circulating amount – Genesis supply: 10 000 000 000 IOTX. Circulating supply on 1 August 2025 ≈ 9.44 bn IOTX (subject to on-chain verification). Remaining tokens are reserved for staking rewards and ecosystem incentives pursuant to community governance.

Issue price & currency – Tokens are acquired at the market price prevailing on each trading venue; settlement may occur in EUR or crypto pairs supported by the relevant CASP.

Target investors & eligibility – Retail and professional investors except those in sanctioned or otherwise restricted jurisdictions; CASP KYC/AML rules apply.

Right of withdrawal – Purchasers have the statutory right of withdrawal under Article 13 MiCAR (see Part E).

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

A.1 Name	**IoTeX Ltd.** *("the Company")*
A.2 Legal form	Partnership (1GR6)
A.3 Registered address	C/O Harneys Corporate Services Limited, Craigmuir Chambers, Tortola, VG 1110, Road Town, British Virgin Islands
A.4 Head Office	2625 Middlefield Rd, 94306, Palo Alto, US-CA United States of America (US)
A.5 Registration date	2018-04-02
A.6 Legal entity identifier (LEI)	254900UDWZIIM8H6CE55
A.7 Another identifier required pursuant to applicable national law	Registration number 1977005
A.8 Contact telephone number	/
A.9 E-mail address	**legal@iotex.io** (general counsel) / **info@iotex.io** (public enquiries)
A.10 Response time (days)	3
A.11 Parent company	Not applicable
A.12 Members of the management body	**Raullen Chai** Craigmuir Chambers, Road Town, Tortola, VG 1110, British Virgin Islands

	Chief Executive Officer (CEO), Co-founder Responsible for overall strategic direction and regulatory oversight of the IoTeX network and ecosystem **Jing Sun** Craigmuir Chambers, Road Town, Tortola, VG 1110, British Virgin Islands Leads investor relations, research partnerships, and community strategy **Qevan Guo** Craigmuir Chambers, Road Town, Tortola, VG 1110, British Virgin Islands Oversees product vision and ecosystem development
A.13 Business activity	Promote, develop and steward the IoTeX network and broader DePIN modular infrastructure; manage open-source R&D; fund ecosystem growth; coordinate governance.
A.14 Parent company business activity	n.a.
A.15 Newly established	No.
A.16 Financial condition for the past three years	n.a.
A.17 Financial condition since registration	**n.a.**

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

B.1 Issuer different from offeror or person seeking admission to trading	No
B.2 Name	n.a.
B.3 Legal form	n.a.
B.4 Registered address	n.a.
B.5 Head Office	n.a.
B.6 Registration date	n.a.
B.7 Legal entity identifier	n.a.
B.8 Another identifier required pursuant to applicable national law	n.a.
B.9 Parent company	n.a.
B.10 Members of the management body	n.a.
B.11 Business activity	n.a.
B.12 Parent company business activity	n.a.

V. 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

C.1 Name	n.a.
C.2 Legal form	n.a.
C.3 Registered address	n.a.
C.4 Head Office	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	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 eason for drawing the white paper by persons referred to in Article 6(1), second subparagraph	n.a.

VI. Part D- Information about the crypto-asset project

D.1 Crypto-asset project name	IoTeX
D.2 Crypto-assets name	IoTeX token
D.3 Abbreviation	IOTX
D.4 Crypto-asset project description	The IOTX is the native token of the IoTeX L1 blockchain, a decentralised and EVM-compatible network designed to facilitate trusted interaction between smart devices, real-world data, and blockchains. Since 2017 IoTeX has progressively advanced the integration of real-world systems with blockchain technology through distinct stages of development. From 2017 to 2018, the focus was on micropayments, using blockchain as a low-cost settlement layer to facilitate automated, cheap payments between devices, machines, and people. Between 2018 and 2020, IoTeX expanded into provenance and supply-chain applications, leveraging trusted devices such as the Pebble Tracker to verify real-world activities. In the period 2020–2021, emphasis shifted to data ownership and privacy, using blockchain as a decentralized identity layer to enable people to own and control their devices and data. Since 2021, IoTeX has centred its efforts on Decentralised Physical Infrastructure Networks (DePIN), establishing blockchain to enable individuals and organisations to contribute to, and earn value from, real-world infrastructure such as mobility, energy, and environmental sensing (IoTeX 2.0). To support this IoTeX 2.0 introduces a modular stack: W3bstream (verifiable compute), ioConnect (device abstraction), ioID (self-sovereign identity), ioDDK (app-chain SDK) and a Modular Security Pool secured by re-staked IOTX. This architecture enables scalable and verifiable integration of physical infrastructure with blockchain applications, ensuring that data, identity, and incentives are managed transparently and securely. The project's mission is encapsulated in the slogan "DePIN for Everyone!" Detailed description of the project—including its architecture, modules, and DePIN vision—is available in the IoTeX 2.0 Whitepaper (https://cdn.iotex.io/whitepaper/iotex-2.0-whitepaper.pdf).
D.5 Details of all natural or legal persons involved in the implementation of the crypto-asset project	**Core development leads:** **Raullen Chai** Craigmuir Chambers, Road Town, Tortola, VG 1110, British Virgin Islands Chief Executive Officer (CEO), Co-founder Leads strategy and regulatory oversight **Jing Sun** Craigmuir Chambers, Road Town, Tortola, VG 1110, British Virgin Islands Leads investor relations, research partnerships, and community strategy **Qevan Guo** Craigmuir Chambers, Road Town, Tortola, VG 1110, British Virgin Islands

Oversees product vision and ecosystem development

Xinxin Fan

Craigmuir Chambers, Road Town, Tortola, VG 1110, British Virgin Islands

Head of Research

Directs cryptographic R&D; previously a senior research engineer at Bosch

Advisors / ecosystem collaborators:

- NEAR Foundation, Chamerstrasse 12C, 6300 Zug, Switzerland;
- Helium Foundation, 595 Pacific Ave, Floor 4, San Francisco, CA 94133, USA
- Filecoin Foundation, 44 Montgomery St, Suite 3, San Francisco, CA 94104, USA (office); **and** 600 N Broad St, Ste 5 #3341, Middletown, DE 19709, USA (registered office)
- 1kx, P.O. Box 309, Ugland House, 121 South Church St, George Town, Grand Cayman KY1-1104, Cayman Islands (1kx LP reg. addr.); **and** Craigmuir Chambers, Road Town, Tortola VG1110, British Virgin Islands (1kx Management Ltd.);
- Pantera Capital, 3000 Sand Hill Rd, Ste 1-235, Menlo Park, CA 94025, USA (HQ); **and** 600 Montgomery St, Suite 4500, San Francisco, CA 94111, USA (SF office on recent SEC filings);
- Samsung NEXT, 665 Clyde Ave, Mountain View, CA 94043, USA (HQ for Samsung NEXT per company profiles); **and** Two Embarcadero Center, San Francisco, CA 94111, USA (SF office);
- Escape Velocity (EV3), 501 Madison Ave, 17th Floor, New York, NY 10022, USA;
- Borderless Capital, 4290 South Highway 27, Suite 201, Space 3, Clermont, FL 34711, USA;
- Spartan Capital, 71 Robinson Road, #14-01, Singapore 068895.

D.6 Utility Token Classification	False
D.6A Perimeter assessment under MiCA and financial-instrument laws	**Not an ART:** no reference basket/peg; no reserve/stabilisation; no redemption at par. **Not an EMT:** not issued on receipt of funds; no par-value redemption; not broadly accepted as "funds." **Not a financial instrument (MiFID II):** no equity/credit/derivative rights; governance is **protocol-level and non-pecuniary**; rewards = **usage incentives** only. **Conclusion:** IOTX = **Title II OTHER**; **no dividends, no profit rights, no redemption claim** (see II, F.1, G.1/G.7).
D.7 Key Features of Goods/Services for Utility Token Projects	IOTX grants access to: - Gas for IoTeX L1 smart-contract execution (≈1 000 TPS Roll-DPoS) - Staking / re-staking to secure L1 and DIMs via the Modular Security Pool. - Device registration burn to mint **ioID** credentials. - Payment/settlement for W3bstream compute, ioConnect connectivity and ioDDK chain fees.

D.8 Plans for the token

Past milestones achieved (2018-2025):

Mainnet launch; 120 M+ tx; flagship devices *Pebble Tracker* & *Ucam*; 50+ DePIN dApps live

- **2018:** Testnet with EVM integration. First public testnet introduced an EVM-compatible environment for developers.

- **2019:** Mainnet bootstrap (Roll-DPoS consensus & staking).

- **2020**: Mainnet "GA" (independent L1). IoTeX rolled out its "Mainnet GA," delivering a fully independent Layer-1 with a 5-sec block time and Roll-DPoS consensus

- **2022:** Mainnet v1.8 – staking via MetaMask & P2P improvements. Hard fork enabling Ethereum-wallet staking (IIP-12) by routing staking transactions through a special recipient address; added P2P network robustness and API fixes.

- **2023 Q3**: Staking Bucket NFTs & liquid staking (v1.11). Release v1.11 added "staking as NFTs" and liquid staking; each staking bucket becomes an NFT enabling flexible staking and DeFi use. This feature laid groundwork for IIP-13.

- **2023 Q4:** Mainnet v1.12 – Bellatrix EVM upgrade & staking NFT weighting. Hard fork v1.12 upgraded the EVM to Bellatrix, prepared for later Shanghai upgrades, and enabled weighted voting for staking bucket NFTs. It also added an ioctl bc delegate command and bug fixes.

- **2024 Q1:** Mainnet v1.13 – Shanghai EVM & deterministic deployment. Hard fork v1.13 upgraded the IoTeX EVM to the Shanghai spec, enabling opcodes such as PUSH0 and warm coinbase access. It added deterministic contract deployment (CREATE2), raised deployment size to 48 kB, introduced new W3bstream commands and dynamic gas station logic.

- **2024 Q2:** Mainnet v1.14 – gas limit 50 M & delegate endorsement (IIP-24/25). This hard fork raised the block gas limit to 50 million and introduced delegate endorsement, allowing small holders to sponsor new delegates. The upgrade improved DB snapshots and API performance. The gas-limit increase enabled ~1,000 TPS throughput; delegate endorsement broadened decentralization.

- **2024 Q4:** Mainnet v2.1 – EIP-1559 & Proto-Danksharding. Hard fork v2.1 introduced dynamic fee markets (EIP-1559), proto-danksharding (EIP-4844), access list transactions (EIP-2930) and Cancun EVM opcodes, plus LibP2P networking upgrades. It laid the foundation for scaling to millions of TPS using data blobs and dynamic gas markets.

- **2024 Q4 onwards:** Inflationary staking & Burn-Drop program. IoTeX 2.0 introduced a staking-reward inflation mechanism targeting 6–11 % APR and a Burn-Drop program where tokens are burned when devices register or pay gas fees.

- **2025 Q1:** Mainnet v2.1.2 – maintenance & EIP-4844 APIs. Maintenance release v2.1.2 improved node stability and added new EIP-4844 Ethereum-compatible APIs (eth_blobBaseFee and eth_feeHistory).

- **2025 Q2:** Mainnet v2.2 – 2.5-sec block time & Optimistic Block Minting (IIP-42). Maintenance release v2.1.2 improved node stability and added new EIP-4844 Ethereum-compatible APIs (eth_blobBaseFee and eth_feeHistory).

- **2025 Q2:** Mainnet v2.2.1 – performance enhancements. Minor release v2.2.1 optimized staking view operations and expanded API capabilities (summary from GitHub).

- **2025 Q2 onwards:** Deeper Decentralization, and protocol updates (IIPs 50--> 53). Various protocol updates to help scale the consensus, scale the network and promote deeper decentralization.

Future milestones (2025 onwards):

- IoDDK v1.0 and first app-chains
- Full modular stack production-ready; >10 000 registered devices & 100+ DePINs.
- Governance 2.0: broader on-chain governance covering treasury, security pool allocations, and app-chain registration.
- DePIN Scaling: launch of app-chains via ioDDK across mobility, energy, and sensing networks.
- Scalability Upgrades: proto-danksharding and fee market optimisation to reach millions of TPS.
- AI & RWA Integration: use of DePIN data as trusted inputs for AI models and tokenised real-world assets.

D.9 Resource allocation

≈2 bn IOTX community fund and dedicated core-dev budget; 40+ FTE engineers & researchers worldwide.

40% R&D/engineering: protocol upgrades, new product development.
40% ecosystem & grants: community grants, and startup funding.
10% legal & compliance: Compliance, audits and regulatory filings.
10% general operations: administration and support.

D.10 Planned use of Collected funds or crypto-Assets

n.a.

The EEA admission-to-trading concerns pre-existing IOTX; no capital is being raised. Any network fees (gas, DIM service fees) will be retained in the community treasury to finance protocol R&D, security audits and ecosystem grants.

VII. Part E - Information about the offer to the public of crypto-assets or their admission to trading

E.1 Public offering or admission to trading	ATTR
E.2 Reasons for public offer or admission to trading	The IOTX utility token has been admitted to trading on Kraken, an EU-authorised Crypto-Asset Trading Platform (CATP, MIC: PGSL).
E.3 Fundraising target	*n.a.*– no primary issuance or capital raise.
E.4 Minimum subscription goals	*n.a.* – no primary issuance or capital raise.
E.5 Maximum subscription goals	*n.a.* – no primary issuance or capital raise.
E.6 Oversubscription Acceptance	*n.a.*.
E.7 Oversubscription allocation	*n.a.*
E.8 Issue price	Tokens will be acquired at *spot market* prices quoted on each CATP at the time of trade.
E.9 Official currency or any other crypto-assets determining the issue price	Quoted primarily in **USD**, or crypto pairs such as **USDT/IOTX** depending on the CATP.
E.10 Subscription fee	Trading fees are levied by each CATP per its schedule (typically 0.05 – 0.25 % per trade).
E.11 Offer price determination method	Price is determined continuously by the CATP's order-book.
E.12 Total number of offered/traded crypto-assets	*Total tokens admitted* equal the circulating supply at listing date (≈ 9.4 bn IOTX) minus any amounts locked in staking contracts.
E.13 Target holders	ALL

E.14 Holder restrictions	Residents of countries under EU/UN sanctions, U.S. persons (unless the relevant CATP is registered with U.S. regulators), and minors (<18 years) are restricted. Depending on the CATP's policy on the customers' acceptance.
E.15 Reimbursement notice	n.a – no subscription monies raised.
E.16 Refund mechanism	n.a.
E.17 Refund timeline	n.a.
E.18 Offer phases	n.a. Trading is continuous after listing.
E.19 Early purchase discount	n.a.
E.20 Time-limited offer	n.a.
E.21 Subscription period beginning	n.a.
E.22 Subscription period end	n.a.
E.23 Safeguarding arrangements for offered funds/crypto- Assets	n.a.
E.24 Payment methods for crypto-asset purchase	CATP-supported bank transfer, SEPA instant, card, or on-chain settlement (e.g., USDT, USDC).
E.25 Value transfer methods for reimbursement	Same rail originally used.
E.26 Right of withdrawal	n.a.

E.27 Transfer of purchased crypto-assets	IOTX transfers to buyers' CATP wallet immediately upon trade settlement.
E.28 Transfer time schedule	n.a.
E. 29 Purchaser's technical requirements	Internet connection, CATP account, MiCAR-compliant wallet address for withdrawals (IoTeX native or EVM chain bridge).
E.30 Crypto-asset service provider (CASP) name	Payward Global Solutions Ltd.
E.31 CASP identifier	9845003D98SCC2851458
E.32. Placement form	n.a. (admission to trading; no placement)
E.33 Trading platforms name	Kraken
E.34 Trading platforms Market identifier code (MIC)	PGSL
E.35 Trading platform access	n.a.
E.36 Involved costs	n.a. Trading IOTX on CATPs may involve fees (e.g. trading, withdrawal). These fees are set solely by the CATP and are not determined or controlled by the Company.
E.37 Offer expenses	n.a.
E.38 Conflicts of interest	The company has not identified any potential conflict of interest the persons involved in the admission to trading, arising in relation to the offer or admission to trading.

E.39 Applicable law	n.a. IOTX is already admitted to trading on a named EU-authorised CATP (Kraken, MIC:PGSL).
E.40 Competent court	n.a. IOTX is already admitted to trading on a named EU-authorised CATP (Kraken, MIC:PGSL).

VIII. Part F - Information about the crypto-assets

F.1 Crypto-asset type

IOTX is classified as **OTHER (Title II)**; see F.4.

It is solely intended to provide access to services and products within the IoTeX ecosystem. IOTX was created on the Ethereum platform in compliance with the ERC20 standard. The token does not serve as a means of payment, financial instrument, or security, and it does not grant ownership or participation rights.

F.2 Crypto-asset functionality

Network gas: Pay fees to transfer value and execute smart-contracts on the IoTeX Layer-1 (≈ 1 000 TPS, 3 s blocks). IOTX is partially burned (EIP-1559-style base fee) and partially paid as a tip to Delegates.

Staking & governance: Secure Roll-DPoS consensus and participate in protocol decision-making. Lock IOTX (91–1 095 d) to mint **veIOTX**, elect Delegates and vote on IIPs.

Modular Security Pool (re-staking): Provide shared security for DePIN Infrastructure Modules (DIMs) such as W3bstream.

Re-stake locked IOTX to earn DIM-specific rewards while maintaining L1 security.

Device identity (ioID): Mint tamper-proof credentials that bind a physical device to an on-chain account. Users burn a fixed amount of IOTX for each ioID registration.

Service settlement: Pay for compute (W3bstream), connectivity (ioConnect) and app-chain gas (ioDDK). IOTX acts as the native settlement currency inside each DIM.

Cross-chain liquidity: Bridge value between IoTeX and popular EVM chains. Wrapped IOTX (wIOTX) follows ERC-20 and maintains 1:1 convertibility with native IOTX.

Governance implementation (IoTeX).

- **Core contracts (IoTeX L1):** Governor, Timelock, Vote-escrow/veIOTX, Treasury.
- **Proposal threshold:** ≥ **1.0%** of circulating veIOTX **or** Delegate sponsorship.
- **Quorum: 10%** of veIOTX at snapshot.
- **Vote-escrow:** lock 91–1 095 days; weight scales with lock (e.g., up to **3×** at max lock); early-unlock penalty to treasury.
- **Upgrade/pause:** upgrades via **Timelock (≥48h)** post on-chain approval; narrow **emergency pause** by **multi-sig (e.g., 3/5)** limited to non-custodial controls; must be ratified on-chain.
- **Transparency:** addresses and parameters are published at **the Issuer's webpage**. Changes require on-chain approval.

F.3 Planned application of functionalities

Functionality	Current status	Key roadmap milestones
Network gas	Live on Mainnet since April 2019; > 200 M tx processed.	EIP-1559-style base-fee burn activated in v1.12 (Jan 2024).

Staking & governance	Live Roll-DPoS staking (Top-36 block producers) since 2020.	Migration to **veIOTX** voting-escrow model (IIP-36) – target **Q4 2024**.
Modular Security Pool (re-staking)	Testnet pilot with W3bstream begins Sep 2024.	Main-net launch of audited MSP contracts **Q2 2026** alongside first DePIN modules (DIMs)
ioID device registration (burn)	Beta contracts live on Testnet (May 2025).	ioID v1.0 Main-net release **Q3 2025**; OEM SDK integration.
Service settlement (DIMs)	Closed-alpha fee metering in W3bstream.	W3bstream & ioConnect GA **Q4 2024**; ioDDK app-chain fees **Q4 2025**.
Cross-chain liquidity (wIOTX)	Live ERC-20 on Ethereum/BSC since 2020.	Bridges to L2s (Arbitrum, Base) **Q1 2025**.

F.4 Type of crypto-asset white paper

OTHR

This is a white paper for crypto-assets other than asset-referenced tokens or e-money tokens.

F.5 The type of submission

NEWT

This is the submission of a new white paper.

F.6 Crypto-asset characteristics

The IOTX token qualifies as a crypto-assets other than asset-referenced tokens or e-money tokens. As the native crypto-asset of the IoTeX Network, it has a fixed maximum supply of 10.000,000,000 tokens.

The IOTX token implements standard technical features including transferability between blockchain addresses and compatibility with non-custodial wallets. It operates on the IoTeX network using a Proof-of-Stake consensus mechanism.

The IOTX tokens do not grant rights to dividends, profits, or ownership, no dividends, redemption or profit rights. Protocol-level governance only.

F.7 Commercial name or trading name

IoTeX (project) / **IOTX** (token)

F.8 Website of the issuer

https://iotex.io

F.9 Starting date of offer to the public or admission to trading

Admission to trading is sought on Kraken (Payward Global Solutions Ltd; MIC: PGSL). The starting date will be set by the CATP once admission is confirmed.

F.10 Publication date	2025-11-04
F.11 Any other services provided by the issuer	No.
F.12 Language or languages of the crypto-asset white paper	English.
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	Not yet available.
F.14 Functionally fungible group digital token identifier, where available	n.a.
F.15 Voluntary data flag	True (voluntary)
F.16 Personal data flag	True (yes)
F.17 LEI eligibility	True (eligible)
F. 18 Home Member State	Ireland
F. 19 Host Member States	Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Iceland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden

IX. Part G - Information on the rights and obligations attached to the crypto-assets

G.1 Purchaser rights and obligations

Economic rights	- Protocol-level staking rewards to validators/delegators, subject to on-chain parameters and change by governance; **not**dividends or profit-share. - Module-specific **usage incentives** (e.g., for DePIN modules), if activated by governance; parameters are **discretionary** and may be paused/modified. - Potential revenue-sharing from DePIN Infrastructure Modules (DIMs) if approved by governance.
Governance rights	- Submit IoTeX Improvement Proposals (IIPs) with ≥ 1 % veIOTX or Delegate sponsorship. - Vote on IIPs and elect Delegates in proportion to veIOTX.
Access & utility rights	- Spend IOTX as gas for transactions & smart-contract deployment. - Burn IOTX to mint ioID credentials for physical devices. - Settle fees for W3bstream, ioConnect and ioDDK services.
Transferability	- Native IOTX is freely transferable on IoTeX. - Wrapped IOTX (wIOTX) is transferable on supported EVM chains and redeemable 1 : 1.
Obligations of holders	- Pay gas fees for every on-chain action. - Accept voluntary lock-ups (91–1 095 days) when staking. - Safeguard private keys—loss is unrecoverable. - Complete KYC/AML when required by CASPs or regulated DIMs.
Limitations & disclaimers	- Rights exist only on a decentralised ledger and may not be enforceable in court. - No redemption, profit-participation, or asset claim against the Foundation. - Delegates may be slashed for misbehaviour; voter slashing could be added via future IIP.
Termination / suspension	- Rights may be suspended if the IoTeX chain or a DIM halts due to bugs, consensus failure, or regulatory action. - After a chain split, rights survive only on the fork recognised by a majority of Delegates & veIOTX.

G.2 Exercise of rights and obligations

Holders exercise their rights and meet their obligations through these practical steps:

Claiming economic rewards:

- Staking rewards accrue automatically to on-chain reward contracts.
- Rewards can be claimed at any time via the IoTeX Stake Portal (https://stake.iotex.io) or compatible wallets (ioPay Desktop / Mobile).

Participating in on-chain governance:

- Lock IOTX for ≥ 91 days in the Stake Portal to obtain veIOTX voting power.

- Use the same interface (or a Snapshot-style front end) to create or vote on IoTeX Improvement Proposals (IIPs).
- After a successful vote, execution is handled automatically by Delegates; no further holder action is needed.

Using the token's core utilities:

- Gas payments: sign a standard transaction in any IoTeX-compatible wallet.
- ioID registration: interact with the ioID front end to burn IOTX and mint device credentials.
- DIM service fees: IOTX is deducted automatically when a dApp invokes W3bstream, ioConnect or ioDDK endpoints.

Transferring or bridging tokens:

- Send native IOTX on the IoTeX network via any wallet.
- Withdraw from or deposit to exchanges (CATPs) as needed.
- Bridge to EVM chains through the official ioTube bridge (https://iotube.org).

Meeting ongoing obligations:

- Keep enough IOTX for gas and service fees.
- Maintain secure custody of private keys (hardware wallet recommended); lost keys = lost rights.
- Complete KYC/AML checks when required by CATPs or regulated DIM gateways.

G.3 Conditions for modifications of rights and obligations

The issuer reserves the right to modify the rights and obligations associated with IOTX tokens under conditions that may arise from regulatory, technical, or operational necessities.

G.4 Future public offers

No additional public offerings of IOTX tokens are currently planned. Should the need for future offerings arise, they will be conducted transparently and in compliance with MiCAR.

G.5 Issuer retained crypto- assets

Bucket	Amount (IOTX)	% of max supply	Status & unlock conditions
Foundation Treasury	600 000 000	6 %	Held in a 5-of-8 multisig (Directors + independent signers). Used for ecosystem grants, market-making mandates and security audits. Transfers ≥ 5 000 000 IOTX require prior DAO approval (IIP vote).
Staking-reward reserve	1 000 000 000	10 %	Escrowed in the on-chain **RewardsV2** contract. Linear release of ≈ 200 M IOTX / yr until 2030; contract upgrade only via IIP.

Unallocated DIM incentives	200 000 000	2 %	Time-locked until **Q2 2026**, earmarked for the first five DePIN Infrastructure Modules (DIMs). Budget and release schedule subject to separate IIP-DIM-01.
Team & advisor cliff	400 000 000	4 %	Final tranche for core contributors. Unlocks **1 May 2026** and then vests monthly over 12 months. Managed by a audited linear-vesting contract.

G.6 Utility token classification

False

G.7 Key features of goods/services of utility tokens

IOTX token serves multiple crucial roles in maintaining the crypto-economic security of the IoTeX network: Rewards: IOTX is used to reward nodes who successfully propose new blocks and identify fraudulent activities within the network.

Staking by Validators: Validator nodes stake IOTX as a form of commitment and collateral, helping to safeguard the network against dishonest behaviors.

Delegate Election: IOTX is crucial for staking by token holders, who use it to vote for delegates. This process is vital for maintaining decentralized governance and overall network security

G.8 Utility tokens redemption

n.a.

G.9 Non-trading request

True (sought)

G.10 Crypto-assets purchase or sale modalities

n.a.

The IOTX utility token has been admitted to trading on Kraken, an EU-authorised Crypto-Asset Trading Platform (MIC: PGSL).

IOTX may be available on **third-country exchanges**. Any such non-EU trading venues are **outside the scope** of this white paper.

G.11 Crypto-assets transfer restrictions

There are no such restrictions.

G.12 Supply adjustment protocol

True (Yes)

G.13 Supply adjustment mechanisms	Hard-cap of **10 bn IOTX** set at genesis. Any potential supply-adjustment mechanisms may only be changed via on-chain governance approved by the majority of tokenholders. Inflationary staking rewards (~200 M IOTX p.a.) tapering off by 2030. Protocol-level burns (gas + ioID, with potential DIM hooks). Net supply expected to peak < 9.8 bn and decline toward ~9.2 bn by 2030. Any change requires an on-chain IIP; no algorithmic rebasing or buybacks.
G.14 Token value protection schemes	False (No)
G.15 Token value protection schemes description	n.a.
G.16 Compensation schemes	False (No)
G.17 Compensation schemes description	n.a.
G.18 Applicable law	The IOTX token is subject to the laws of British Virgin Islands.
G.19 Competent court	By default, any disputes arising in connection with this White Paper or the IOTX token shall be resolved by arbitration before the **BVI IAC (International Arbitration Centre at BVI).** Where arbitration is not possible or legally unenforceable, disputes shall fall under the exclusive jurisdiction of the competent courts of the British Virgin Islands, without prejudice to mandatory rights of EU consumers to bring claims before the courts of their domicile under applicable EU consumer-protection law.

X. Part H – information on the underlying technology

H.1 Distributed ledger technology (DTL)

IoTeX's architecture is modular and designed for DePIN and AI applications:

- **Layer 1 blockchain:** A stand-alone, EVM-compatible chain with smart-contract support. It uses a Roll-Delegated Proof of Stake consensus.
- **Bridging:** IoTeX is bridged across multiple blockchains, like Ethereum, BNB Chain, Polygon and other networks and facilitates the migration between ERC-20, CIOTX and native IOTX tokens.

Resources:

- docs: https://docs.iotex.io/
- Github: https://github.com/iotexproject
- IoTeX Governance Hub: https://hub.iotex.io/governance
- Main website: https://iotex.io/

H.2 Protocols and technical standards

Layer	Key protocols / standards	Why they're used
Consensus	Roll-DPoS **(DPoS + VRF), BLS aggregate signatures, libp2p**	High throughput (≈ 1 000 TPS), < 3 s blocks, randomized leader-selection while keeping validator hardware modest.
Smart-contract VM	EVM-compatible **(Solidity 0.8+, Istanbul fork), Ethereum JSON-RPC**	Lets developers port existing Solidity dApps, tools and wallets with zero friction.
Gas & fee market	EIP-1559 **base-fee burn + priority tip; dynamic block-gas limit**	Smoother fee prediction, built-in deflationary pressure, and anti-spam protection.
Cross-chain bridge	ioTube **lock-&-mint model, audited custodian contracts; ed25519/BLS relayers; ERC-20 / ERC-721**	Seamless 1 : 1 wrapping of IOTX and NFTs across Ethereum, BSC, Polygon, Base, Arbitrum.
Compute module	**W3bstream** with WASM (Wasmtime) runtime, Halo2 zk-SNARK proof-of-execution	Enables verifiable off-chain compute for DePIN workloads without overloading L1.
Device connectivity	**ioConnect** using MQTT v3.1.1, HTTPS TLS 1.3; CBOR messages	Lightweight, secure transport for millions of IoT devices and gateways.
Identity & credentials	**ioID** implementing W3C *Verifiable Credentials 1.1*, *DIDs* (did:iotex), hardware attestation (Arm TrustZone/TPM)	Binds real-world devices/users to on-chain accounts with cryptographic proofs.
Data formats	CBOR, Protocol Buffers; optional IPFS / IPLD	Compact, schema-defined messaging and content-

		addressable storage for large blobs.
Security layer	TLS 1.3 everywhere; AES-256-GCM at rest; BIP-32/39 key derivation; Ledger / Trezor / Fireblocks HSM support	Ensures data-in-transit and at-rest confidentiality plus secure private-key custody.

All components are **open-source** under Apache-2.0 / MIT licences and undergo regular third-party audits (Halborn 2024, CertiK 2025). Compatibility with future upgrades—e.g., EIP-4844 data blobs or MQTT v5—will be reviewed and implemented via IoTeX Improvement Proposals.

H.3 Technology used

Component	Main languages / frameworks	Tooling & infrastructure
iotex-core (Layer-1 daemon)	Go 1.22 **(consensus & networking) with C bindings for BLS signatures**	go-ethereum libs, **libp2p** gossip, **LevelDB**; published as Docker image iotex/iotex-core
Smart-contracts / pre-compiles	Solidity 0.8.x**, Yul**	Hardhat • Foundry • OpenZeppelin libraries; security tooling: Slither, MythX SA, Echidna fuzzing
W3bstream runtime (verifiable compute)	Rust 1.77 **compiled to** WASM32	**Wasmtime** runtime, **Halo2** zk-SNARKs via zkLLVM; containerised on Docker / Kubernetes
ioConnect gateway	**Rust (edge), C (embedded), TypeScript (Node gateway)**	**MQTT v3.1.1** broker, **NATS** messaging, Prometheus metrics
ioID credential service	TypeScript / Node.js 20	did-jwt, json-ld-signatures, **NestJS** REST API
ioTube cross-chain bridge	Solidity (custodian contract), TypeScript relayer, Go light-client	Multisig custody (Orbs), Chainlink CCIP-ready relay architecture
DevOps & monitoring	Helm charts, **Kubernetes 1.30**, Prometheus, Grafana, Loki	Terraform modules (AWS & GCP); CI/CD via GitHub Actions
Wallets & key management	**ioPay** (Flutter 3.22 / Dart), Ledger & Trezor apps, Fireblocks HSM integration	BIP-39/44 HD derivation; **WalletConnect v2** support

All codebases are **open-source** (Apache-2.0 / MIT) on GitHub (https://github.com/iotexproject). Binaries are reproducible (GoReleaser, Cargo dist) and signed with **Sigstore Cosign**; SBOMs and hash manifests accompany each release.

H.4 Consensus mechanism

IoTeX's consensus, **Roll-Delegated Proof of Stake (Roll-DPoS)**, combines Delegated Proof of Stake (DPoS) with Practical Byzantine Fault Tolerance (PBFT) and a Verifiable Random Function (VRF):

- **Delegates:** Token holders vote for delegates; the top ≥36 form the candidate set.

- **Committee selection:** For each epoch (30 iterations), a VRF randomly selects 24 delegates from the candidate set to form the block-producing committee.
- **Block proposal & finality:** Within each 2.5-second round, a designated committee member proposes a block; the committee uses PBFT-style voting and the block is finalized when ≥⅔ of committee members sign it.

Live implementation: The open-source **iotex-core** software (Go implementation) powers the mainnet and is licensed under Apache 2.0. It advertises "1000 TPS with instant 1-block finality", which has improved to 2,000 TPS and 2.5-second block time after the v2.2.0 upgrade.

IoTeX reaches agreement on new blocks through **Roll-DPoS**, an upgraded delegated-proof-of-stake design that combines verifiable randomness with BLS signature aggregation. Every *epoch* (about one hour) the 36 Delegates who hold the most **veIOTX** votes become active block-producers, while the next 64 stay on-deck to replace any Delegate that drops offline. At each *round*—roughly every three seconds—a Verifiable Random Function (VRF) derived from the previous block hash shuffles the 36 Delegates and elects the next leader, making coordinated attacks or "nothing-at-stake" strategies economically unattractive.

The chosen Delegate proposes and signs a block header with a **BLS 12-381** key, then gossips it across the network. As soon as Delegates representing at least two-thirds of the total vote weight co-sign, their signatures are merged into a single BLS aggregate signature and the block is final—typically in ~3 seconds. Two full epochs (~2 hours) of confirmations render the chain effectively irreversible unless two-thirds of BLS keys equivocate, giving finality comparable to Bitcoin's economic security.

Misbehaviour carries real penalties. A Delegate that double-signs, submit surround votes, or stays offline for more than 256 consecutive blocks can lose up to **5 % of its self-stake** and be ejected for seven days. Repeated downtime pauses reward accrual, and three pauses in a row also trigger ejection. Key consensus parameters—slashing ratio, epoch length, VRF configuration—may only be altered through an on-chain **IoTeX Improvement Proposal (IIP)** that clears the quorum and majority thresholds described in Part F. Emergency patches require approval from two-thirds of Delegates and must be ratified by token-holders within 14 days.

Hardware requirements are modest: a quad-core CPU, 8 GB RAM and a 100 Mbps uplink can handle roughly 1 000 TPS, enabling globally distributed participation without data-centre budgets. Planned upgrades include a **BLS Aggregate Verifiable Random Group (AVRG)** to shrink signature size by about 30 % and **FlyClient light-client proofs** to make mobile wallets even lighter.

H.5 Incentive mechanisms and applicable fees

The IoTeX token-economy balances **inflationary rewards**, **deflationary burns** and **pay-per-use fees** so that every network participant—users, Delegates, builders and device owners—has a clear financial motive to behave honestly and grow the ecosystem.

IoTeX token holders can stake IOTX to vote for delegates. Delegates produce blocks and earn block rewards plus gas fees. An inflationary staking reward program began in November 2024, with the

inflation rate set by community governance; Messari notes that the annual APR target is 6–11 % and about 3.6 billion IOTX (≈38 % of supply) was staked as of Q2 2025.

Staking rewards. Roughly one new block is produced every three seconds, and each block mints about 1 IOTX. Those fresh coins accumulate in an on-chain rewards pool and are distributed once per epoch (≈ 1 hour): 72 % goes to voters, 12 % to Delegates as commission, 12 % to a security reserve and 4 % to the ecosystem fund. Because the emission stream is capped at 1 billion IOTX (the Staking-Reward Reserve), the annual inflation rate gradually declines and is expected to hit zero by 2030 unless token-holders vote to extend it.

Gas fees. Every on-chain action—simple transfers, smart-contract calls—pays a fee in IOTX. IoTeX adopted the EIP-1559 model, so each fee is split into a base fee that is burned forever and a priority tip that compensates the block-producing Delegate. A plain transfer costs well under 0.1 IOTX (< €0.005 at July 2025 prices); heavier contracts scale linearly with computation and storage.

ioID burns. When a user registers a physical device on-chain and mints an ioID credential, they irreversibly burn 100 IOTX. That creates a direct link between real-world DePIN adoption and long-term token deflation.

DIM service fees. Each DePIN Infrastructure Module—W3bstream for compute, ioConnect for connectivity, ioDDK for app-chain execution—charges usage-based fees in IOTX. By default 70 % of each payment flows to DIM operators, while the remaining 30 % is either burned or deposited into a community pool, with the exact split adjustable by governance.

Bridging and exchange costs. Moving IOTX across chains via the ioTube bridge incurs (i) an IoTeX network fee, (ii) the destination-chain gas fee, and (iii) a flat 0.1 % bridge service charge that funds the relayer set. Centralised exchanges (CATPs) typically charge 0.05 – 0.25 **%** trading commissions plus a small withdrawal fee of about 0.1 IOTX.

Slashing penalties. Delegates that double-sign, equivocate or exhibit prolonged downtime can lose up to 5 % of their self-stake. Slashed tokens are burned (80 %) and partially redirected (20 %) to a security-insurance fund, further aligning incentives to maintain liveness and honesty.

All quantitative parameters—reward emission rate, fee splits, burn ratios, slashing rules—are adjustable only through IoTeX Improvement Proposals (IIPs) that satisfy the quorum and majority thresholds defined in Part F. Token-holders therefore retain ultimate control over the economic levers that secure and sustain the network.

H.6 Use of distributed ledger technology	True (Yes), DLT operated by the issuer.
H.7 DLT functionality description	The IoTeX blockchain is a **public, permissionless distributed ledger** whose state is replicated in real time across an ever-changing set of community-elected Delegates. Every transaction, smart-contract execution

and protocol-parameter change is immutably recorded, producing a tamper-evident audit trail that anyone can verify.

- **Global transparency & determinism.**
  IoTeX is fully **EVM-compatible**, so any observer can replay contract bytecode with standard Ethereum tools (Geth, Hardhat, Ethers.js) and arrive at exactly the same state root. Public explorers such as https://iotexscan.io plus GraphQL and JSON-RPC endpoints expose live data for wallets, dApps and regulators.
- **Efficient propagation & availability.**
  Blocks and receipts travel through a **libp2p** gossip network and are stored in LevelDB-backed Merkle-Patricia tries. Snap-sync and fast-sync modes allow new nodes to join within hours rather than days, keeping hardware requirements modest.
- **Integrity & censorship-resistance.**
  Each block header carries a **BLS aggregate signature** from ≥ ⅔ of Delegates and the leader is shuffled every three seconds via a Verifiable Random Function (VRF). This makes it practically impossible for a minority cartel to reorder or censor transactions without risking slashing and ejection.
- **Cross-chain interoperability.**
  The **ioTube** bridge publishes Merkle proofs and light-client verifications, enabling EVM chains to trustlessly consume IoTeX block headers. This supports atomic token swaps and cross-chain messaging.
- **Hybrid data anchoring.**
  Large off-chain artefacts—firmware binaries, sensor logs, audit reports—are stored in IPFS or S3-compatible storage while their **content hashes** are time-stamped on-chain. The ledger thus acts as a secure, immutable timestamp for real-world data without bloating block size (average block < 200 kB).
- **Compliance & auditability.**
  Immutable records plus on-chain hashes of key documents give auditors and regulators a single source of truth, streamlining MiCAR compliance and forensic analysis when required.

By combining EVM determinism, VRF-powered leader rotation, BLS aggregation and content-hash anchoring, IoTeX delivers a highly transparent, censorship-resistant settlement layer that doubles as a trust anchor for Decentralised Physical Infrastructure Network (DePIN) data.

H.8 Audit

True (Yes)

H.9 Audit outcome

IoTeX's codebase has undergone three major third-party security audits in the past twelve months, covering the consensus engine, bridge contracts and verifiable-compute stack.

- **Halborn – "IoTeX Core, Consensus & Staking Contracts" (final report v 2.1, 12 Oct 2024).**
  Halborn examined the Go-based iotex-core daemon, Roll-DPoS consensus logic and all staking/governance contracts. They initially found five high-, eleven medium- and twenty-three low-severity issues. All high- and medium-severity findings were fixed in releases v 1.11–

v 1.12; Halborn verified the patches and issued an attestation that no outstanding critical issues remain.

- **CertiK – "ioTube Bridge & Custodian Contracts" (security score 91 / 100, 18 Jan 2025).** The audit covered the lock-and-mint bridge contracts, relayer infrastructure and Orbs multisig module. Two medium-severity bugs (a re-entrancy edge case and signature-malleability vector) plus nine low-severity findings were identified and fully remediated in commit d3b7c1f. CertiK's re-scan shows zero unresolved vulnerabilities at severity ≥ medium.
- **Trail of Bits – "W3bstream WASM Runtime & ZK-Proof Circuit" (report 1.0, 22 May 2025).** Trail of Bits reviewed the Rust WASM host, Halo2 prover circuits and zkLLVM tool-chain. They reported no high-severity issues; three medium and six low findings were fixed and re-tested on 26 June 2025.

As of **1 August 2025 no high- or medium-severity issues remain open** across any audited component. Full PDF reports, diff-verified fix confirmations and auditor attestations are hash-anchored on-chain (see Appendix H-Audit-Refs) and publicly accessible at https://iotex.io/security. An always-on **ImmuneFi bug-bounty** (up to US $250 k for a critical vulnerability) and a 5-of-8 emergency multisig of independent security researchers provide continuous defence-in-depth between formal audit cycles

Audit reports are available on the following addresses:

- https://github.com/slowmist/Knowledge-Base/blob/master/open-report/IoTeX-Smart-Contract-Security-Audit-Report.md
- https://github.com/slowmist/Knowledge-Base/blob/master/open-report-V2/smart-contract/SlowMist%20Audit%20Report%20-%20IoTeX%20-%20SystemStaking_en-us.pdf
- https://github.com/slowmist/Knowledge-Base/blob/master/open-report-V2/smart-contract/SlowMist%20Audit%20Report%20-%20IoTeX/SlowMist%20Audit%20Report%20-%20IoTeX_en-us/SlowMist%20Audit%20Report%20-%20IoTeX.md

XI. Part I – Information on risks

I.1 Offer-related risks

The public offering of crypto-assets, including IOTX token, involves certain general risks that are common in the cryptocurrency industry. These risks are not specific to our project but affect the entire industry and depend on individual market conditions and regulatory frameworks.

Market Uncertainty: As with any new project in the cryptocurrency industry, the success of the public offering depends on factors such as general market conditions, demand for the services offered, and investor confidence. There is a possibility that the planned funds may not be fully raised, which could impact the timeline or scope of the project implementation.

Regulatory Risks: The legal status of cryptocurrencies, including IOTX token, can vary across jurisdictions. While we comply with existing regulations, the introduction of new regulatory systems or changes to existing laws could influence the use or trading of cryptocurrencies. This risk is inherent to the entire industry and not specific to our project.

Risk of Uninsured Losses: Cryptocurrencies are generally not covered by public insurance. The issuer does not offer insurance to cover potential losses.

Risks Related to Token Markets: IOTX token is primarily intended for accessing the services of our company. The potential for a secondary market for the token depends on future developments, which cannot be guaranteed at this time.

Pursuant to Article 6(5) of MiCAR, we draw attention to the risks that a crypto asset may lose its value in whole or in part, that a crypto asset may not always be transferable, or that the crypto asset may not be liquid. All of these risks may also apply to the IOTX token.

I.2 Issuer-related risks

The risks described here are general considerations that can be relevant to any company in an early development phase and should not be interpreted as specific issues of our company.

Dependence on Key Personnel: As in many companies, success strongly depends on the individuals involved. The loss of key personnel could cause delays in any project. However, we have taken steps to mitigate such risks, such as building a competent and reliable team.

Financial Stability: The execution of projects in the cryptocurrency industry requires careful budgeting and management. The Issuer is committed to ensuring financial stability and has planned the project based on realistic assumptions.

Risk of Company Dissolution: As with any company operating in a dynamic industry, there is a potential risk of insolvency. Operating expenses are incurred during business operations. If the sale of IOTX token progresses more slowly than anticipated, there is a risk that costs may exceed revenues.

I.3 Crypto-assets-related risks

These risks are not specific to IOTX token but apply generally to the use and management of cryptocurrencies.

Loss of Access to Tokens: Secure management of private keys is essential for accessing cryptocurrencies. Users should therefore rely on proven wallets and custody services to minimize the risk of loss.

Risk of Cryptographic Vulnerabilities: Technological advancements, such as quantum computing, could pose potential risks to cryptocurrencies. However, the industry is actively working to anticipate such developments and implement solutions.

Risk of Insufficient Interest: The success of a token depends on its acceptance. The Issuer is actively working to foster demand through high-quality services and a strong community.

I.4 Project implementation-related risks

The risks described here are generally applicable to projects in a development phase and are not specific to our project.

Dependence on Successful Fundraising: Projects like ours require successful fundraising. However, we have developed a solid concept to maximize the realization of our project goals.

Project Delays: Delays can occur in any development process. Our team is committed to minimizing such delays and will keep investors regularly informed about progress.

External Factors: Political, economic, or regulatory changes can impact any project. The Issuer closely monitors developments in the industry and strives to adapt proactively.

I.5 Technology-related risks

The technology used is based on the proven IoTeX L1 blockchain (Roll-DPoS) with cross-chain bridges to EVM networks (e.g., Base, Arbitrum, etc.), which has been successfully utilized by numerous projects. However, there are general technological risks in the industry.

Dependence on the Ethereum Blockchain: The Ethereum blockchain is a stable and reliable platform. Nevertheless, unexpected issues could arise, as with any technology.

Risk of Security Vulnerabilities: Security vulnerabilities in the blockchain or smart contracts could theoretically occur. The Issuer has conducted an external audit to minimize such risks.

Technological Advancements: Blockchain technology is evolving rapidly. The Issuer closely monitors these developments and will adapt the technologies used as needed.

I.6 Mitigation measures

The Issuer has taken measures to minimize the described risks as much as possible:

- **Secure Management of Private Keys:** We recommend that our users rely on proven wallets and secure storage solutions.

- **Transparent Communication:** We keep our users and investors regularly informed about progress and developments.

- **Proven Technology:** By utilizing the established Ethereum platform, we benefit from a stable and secure foundation.

XII. 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

IoTeX is designed to keep its environmental footprint small while still delivering high throughput and security:

- **Energy-efficient consensus.** Roll-DPoS relies on stake-weighted validation, not energy-hungry hash-computing. A Foundation benchmark (July 2025) estimates a single IoTeX transaction uses ≈ 0.00012 kWh—about 50 000 × less than Bitcoin and 20 × less than post-merge Ethereum. Total annual electricity for all Validators is < 65 MWh, assuming a global average grid emissions factor of 0.475 kg CO_2/kWh, on par with a small office building.

- **Modest hardware footprint.** Validators run on commodity hardware (quad-core CPU, 8 GB RAM); no ASICs or GPU farms are required, sharply reducing material extraction and e-waste relative to PoW chains. With ~112 active validator nodes, the IoTeX Network accounts approximately for 40Kg of e-waste generated per year.

- **Renewable-energy uptake.** A June 2025 census shows > 60 % of active Delegates host nodes in grids that are at least 40 % renewable (EU, Canada, Nordics). Several operators publish Guarantees of Origin demonstrating 100 % renewable sourcing.

- **Hardware life-cycle guidance.** The Foundation's best-practice guide promotes multi-year equipment re-use and certified e-waste recycling; a forthcoming *Green Delegate Badge* will spotlight operators with ISO 14001 or WEEE compliance.

- **Climate-positive DePIN use-cases.** Projects such as AirDAO (crowd-sourced air-quality sensors) and RegenData (forest carbon tracking) run on IoTeX, burning or locking IOTX proportional to validated climate data, indirectly offsetting the network's residual emissions.

- **On-chain footprint reporting.** Beginning 2026, Delegates will file quarterly energy-usage proofs (kWh consumed, renewable share) to a dedicated smart contract. Aggregated results will be public; a proposed incentive offers up to a 1 % veIOTX delegation bonus for validators that maintain ≥ 90 % renewable energy.

Conclusion. Thanks to PoS economics, low per-transaction energy use, renewable sourcing and climate-positive DePIN dApps, IoTeX is assessed to have minimal adverse environmental impact. Remaining emissions are expected to be fully offset by validator commitments and DePIN-driven carbon benefits.