



**ZEN**

**White paper**

**Drafted under the European Markets in Crypto-Assets  
Regulation (EU) 2023/114 (MiCA)**

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## **01 Date of notification**

2025-10-16

## **02 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 person seeking admission to trading of the crypto-asset is solely responsible for the content of this crypto-asset white paper.

## **03 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.

## **04 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.

## **05 Statement in accordance with Article 6(5), point (d), of Regulation (EU) 2023/1114**

Not applicable

## **06 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.

## **SUMMARY**

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

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.

### **08 Characteristics of the crypto-asset**

The Horizen Foundation (hereinafter referred to as the “**Foundation**”) has issued and established the Horizen token (hereinafter referred to as “**ZEN**”) as the native crypto-asset of the Horizen ecosystem. ZEN is a fungible digital token with a fixed maximum supply of 21 million (21 000 000) units. ZEN exists as an ERC-20 token on the Base Network, a Layer-2 network that is compatible with the Ethereum blockchain. ZEN can be freely transferred between Base-compatible wallets and traded on platforms that may list or facilitate ZEN.

Holders of ZEN (hereinafter referred to as “**Tokenholders**”) do not acquire ownership rights, shares, or claims against the Foundation or any related entity. Instead, Tokenholders’ primary right is to participate in the governance of the Horizen ecosystem through the Horizen DAO. By holding ZEN, Tokenholders may submit proposals and vote on governance measures, such as improvements to the ecosystem, funding decisions, or changes in project priorities. Participation in governance is voluntary, and Tokenholders may also choose to hold or transfer ZEN without taking part in governance.

These rights connected to ZEN are exercised through token-based voting mechanisms on governance platforms that connect to the Horizen DAO. The Foundation subsequently implements governance outcomes approved by the Horizen DAO, subject to its governing documents and applicable law. Tokenholders are responsible for securing their own wallets and complying with any legal requirements in their jurisdiction.

The conditions under which rights and obligations may be modified are limited to the governance processes of the Horizen DAO. Tokenholders may approve changes through governance proposals. Any such changes are binding on the Foundation provided that they do not conflict with applicable legislation or the Foundation's governing documents.

## 09

Not applicable

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

The Foundation is seeking the admission to trading of ZEN within the European Union (EU) in accordance with the Markets in Crypto-Assets Regulation (EU) 2023/1114 (hereinafter referred to as "**MiCA**"). This white paper does not constitute, and shall not be construed as, a public offer of ZEN in the European Union or in any other jurisdiction. The Foundation will not sell or distribute ZEN to the public in connection with this white paper.

The total supply of ZEN is fixed at 21,000,000 tokens, all of which are intended to be admitted to trading. ZEN is implemented as an ERC-20 token on the Base network and may be freely transferred between compatible wallets and traded on platforms that choose to list it.

The Foundation seeks the admission of all 21,000,000 ZEN to trading on MiCA-compliant trading platforms within the European Economic Area. No public offer of ZEN is being made within the meaning of Article 3(1)(12) of MiCA. These platforms independently determine their own listing policies. The Foundation does not mandate, coordinate, or exercise control over such listings but seeks the trading of ZEN on MiCA-compliant platforms. For the avoidance of doubt, the Foundation has not sought admission to trading under the ruleset of MiCA before the publication of this white paper, as admission to trading can only be sought once this white paper has been published on the Foundation's website.

The Foundation hereby identifies the following MiCA-authorized operators of trading platforms within the EEA on which admission to trading shall be sought initially:

- **Revolut Digital Assets (Europe) Ltd (CY)**

- **360 Treasury Systems AG (DE)**
- **Baden-Württembergische Wertpapierbörse GmbH (DE)**
- **Payward Global Solutions Limited / Kraken (IE)**
- **Bitstamp Europe S.A. (LU)**
- **OKCoin Europe Limited / OKX (MT)**
- **Zillion Bits Limited / ZBX (MT)**
- **Gate Technology Limited / Gate.io (MT)**
- **One Trading Exchange B.V. (NL)**
- **Bitvavo B.V. (NL)**
- **zerohash europe B.V. (NL)**

Tokenholders' primary rights relate to participation in the governance of the Horizen ecosystem through the Horizen DAO. The Foundation serves as the implementing body of approved governance decisions, subject to its governing documents and applicable legislation. Tokenholders should note that holding ZEN does not grant ownership, equity, or profit-sharing rights in the Foundation or any affiliated entity.

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

### **A.1 Name**

The Horizen Foundation

### **A.2 Legal form**

K575 Cayman Islands foundation company (please refer to the [LEI](#) for more information)

**A.3 Registered address**

3119 9 Forum Lane, P.O. Box 114, Grand Cayman KY1-9006, George Town, Cayman Islands  
(please refer to the [LEI](#) for more information)

**A.4 Head office**

3119 9 Forum Lane, P.O. Box 114, Grand Cayman KY1-9006, George Town, Cayman Islands  
(please refer to the [LEI](#) for more information)

**A.5 Registration date**

2023-09-11

**A.6 Legal entity identifier**

25490025UDB7IZN7JM76

**A.7 Another identifier required pursuant to applicable national law**

Not applicable

**A.8 Contact telephone number**

+1 345 925 0299

**A.9 E-mail address**

[gkennedy@leewardmanagement.ky](mailto:gkennedy@leewardmanagement.ky)

**A.10 Response time (Days)**

007

### **A.11 Parent company**

Not applicable (please refer to the [LEI](#) for more information)

### **A.12 Members of the management body**

<b>Name</b>	<b>Business address</b>	<b>Function</b>
Glenn Kennedy	133 C Salt Creek Rd, PO Box 30571, George Town, Grand Cayman, Cayman Islands, KY1-1203	Director

### **A.13 Business activity**

The Foundation is a Cayman Islands foundation company established to enable and develop the growth of the Horizen ecosystem and to steward the Horizen DAO. The Foundation's activities include supporting the Horizen ecosystem's decentralized governance, funding open-source software development, facilitating research and education related to distributed ledger technologies, and administering resources for ecosystem growth.

The Horizen DAO (decentralized autonomous organization) is the decentralized community of Tokenholders who collectively govern the Horizen ecosystem through token-based voting and improvement proposal processes. The Foundation acts as the implementing body for decisions made by the Horizen DAO, in compliance with its governance and applicable law.

As of July 23, 2025, the migration to Base was completed, with ZEN now being issued as an ERC-20 token on the Base Network. Both the legacy Horizen mainchain and the EON chain have been discontinued, and all ZEN transfers are managed via ERC-20 smart contract calls. The Foundation oversees this transition on behalf of the Horizen DAO, ensuring continuity of governance and stewardship. It does not operate for profit and acts solely as a steward for the Horizen DAO. For transparency, you may view the Foundation's Foundational Documents at [https://docs.horizen.io/governance/reference/foundational\\_docs/](https://docs.horizen.io/governance/reference/foundational_docs/) and the Horizen DAO's Constitution at <https://docs.horizen.io/governance/overview/constitution/>.

### **A.14 Parent company business activity**

Not applicable

### **A.15 Newly established**

Yes

### **A.16 Financial condition for the past three years**

Not applicable

### **A.17 Financial condition since registration**

Since its registration, the Foundation has maintained sound financial standing in accordance with its statutory purpose. The Foundation's resources derive from ZEN allocations governed by Horizen DAO improvement proposals, notably ZenIP 42407, which earmarked 2,000,000 (two million) ZEN to the Foundation over a four-year period for ecosystem development, compliance, and operational activities.

As of 31 October 2025, approximately 625,000 ZEN have vested and are held across the Foundation's publicly designated Base addresses. At the 30-day average market rate of EUR 12.22 per ZEN, this corresponds to approximately EUR 7,640,000 (7,64 million). The Foundation's operational expenditures for Q3 2025 amounted to USD 301,839.35 (approx. 301 thousand), primarily covering legal, compliance, research, and infrastructure costs.

The Foundation does not pursue profit-making activities. All resources are applied exclusively to the promotion and development of the Horizen ecosystem in accordance with its Articles of Association and the Horizen DAO's approved funding frameworks. These figures are consistent with the Foundation's publicly reported data under the Horizen Token Transparency Framework (August 2025).

## **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**

Not applicable

**B.3 Legal form**

Not applicable

**B.4 Registered address**

Not applicable

**B.5 Head office**

Not applicable

**B.6 Registration date**

Not applicable

**B.7 Legal entity identifier**

Not applicable

**B.8 Another identifier required pursuant to applicable national law**

Not applicable

**B.9 Parent company**

Not applicable

**B.10 Members of the management body**

Not applicable

**B.11 Business activity**

Not applicable

**B.12 Parent company business activity**

Not applicable

**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**

Not applicable

**C.2 Legal form**

Not applicable

**C.3 Registered address**

Not applicable

**C.4 Head office**

Not applicable

**C.5 Registration date**

Not applicable

**C.6 Legal entity identifier**

Not applicable

**C.7 Another identifier required pursuant to applicable national law**

Not applicable

**C.8 Parent company**

Not applicable

**C.9 Reason for crypto-Asset white paper Preparation**

Not applicable

**C.10 Members of the Management body**

Not applicable

**C.11 Operator business activity**

Not applicable

**C.12 Parent company business activity**

Not applicable

**C.13 Other persons drawing up the crypto-asset white paper according to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114**

Not applicable

## **C.14 Reason for drawing the white paper by persons referred to in Article 6(1), second subparagraph, of Regulation (EU) 2023/1114**

Not applicable

## **Part D- Information about the crypto-asset project**

### **D.1 Crypto-asset project name**

Horizen

### **D.2 Crypto-assets name**

Horizen

### **D.3 Abbreviation**

ZEN

### **D.4 Crypto-asset project description**

Horizen is a privacy-focused appchain ecosystem now operating on Base (an Ethereum L2). Following completion of the migration to Base on 23 July 2025, ZEN functions as a capped-supply ERC-20 token (with a total supply of 21 million ZEN); the legacy Horizen mainchain and EON chain have been discontinued, and all transfers occur via ERC-20 smart contracts on Base. The project's goal is to enable privacy-ready decentralized applications and decentralized finance (DeFi) on Base while leveraging Ethereum's liquidity and tooling.

ZEN serves as the network's core token within the Horizen ecosystem for governance participation and application-level utility across supported decentralized applications (dApps) and integrations. Governance of the ecosystem is community-driven through the Horizen DAO (i.e. the decentralized community of Tokenholders), which submits and votes on improvement proposals with the Foundation implementing those approved decisions.

## D.5 Details of all natural or legal persons involved in the implementation of the crypto-asset project

Name	Role	Domicile
Foundation and DAO	Oversight and governance	Cayman Islands
Cantina (Spearbit Labs Inc.)	Security audit	United States
Horizen Labs, Inc.	Blockchain development	United States
Pristine Compliance Solutions Ltd	This white paper and MiCA-compliance	Finland

## D.6 Utility Token Classification

No

## D.7 Key Features of Goods/Services for Utility Token Projects

Not applicable

## D.8 Plans for the token

ZEN was launched in 2017 as a fair-launch proof-of-work token. Over the following years, Horizen developed an ecosystem of sidechains, including the EVM-compatible EON chain, and in 2023 the Foundation and the Horizen DAO were formally established to steward governance and ecosystem growth. After an extended preparation period, the migration to Base was successfully completed on 23 July 2025. Following this milestone, ZEN now operates as an ERC-20 token on the Base network, with the legacy Horizen mainchain and EON chain discontinued. Looking ahead, the Foundation and the Horizen DAO will continue to strengthen ZEN's role as the core governance token of the Horizen ecosystem.

In line with the Horizen DAO's approval of proposal ZenIP 42407, the Foundation and DAO have been allocated a combined 5 million ZEN over four years to finance ecosystem development, DAO operations, and sustainability initiatives. The immediate roadmap

focuses on growing decentralized applications on Base, enhancing governance participation, and supporting ecosystem grants. Additionally, a sister-project to ZEN, zkVerify is scheduled to launch its mainnet during Q3 2025 with the \$VFY token, part of which will be distributed to Tokenholders and the Foundation, allowing for further implementation of zero-knowledge proof verification capabilities into the Horizen ecosystem.

Over the medium term (approx. 2026–2028), the Foundation plans to continue quarterly financial disclosures through Token Holder Relations Reports, expand Horizen DAO’s funding of projects through the ZEN Sustainability Initiative, and support the adoption of ZEN in decentralized finance across Base and the wider Ethereum ecosystem.

## **D.9 Resource allocation**

The project has been allocated significant resources by the Horizen DAO to ensure long-term sustainability. Pursuant to decision ZenIP 42407, the Foundation was allocated 2 million ZEN over a four-year period, of which 500 000 ZEN was unlocked at the July 2025 migration to Base and the remainder vests in equal monthly installments through 2029. The Foundation maintains publicly labelled treasury wallets on Base and deploys part of its capital in low-risk strategies to support ZEN’s capital markets and extend its operational runway.

The Horizen DAO was allocated approximately 3 million ZEN over the same four-year period, with 750 000 ZEN unlocked at migration with the rest of the balance vesting monthly. Of this amount, 2 million ZEN is earmarked for the ZEN Sustainability Initiative, which is intended to fund ecosystem projects capable of producing long-term revenue streams for the Horizen DAO. The Horizen DAO’s treasury is diversified across ZEN, BTC, ETH and stablecoins, and may be deployed via automated liquidity strategies to generate yield.

In addition, the Foundation has already covered pre-launch costs of USD 301,839.35 in legal, administrative, and development expenses, ensuring that the migration and governance transition were completed successfully. All resources are applied exclusively in furtherance of the project’s mission and disclosed in accordance with the Token Transparency Framework and quarterly Token Holder Relations Reports. For the initial set-up and operating costs, please refer to the Transparency Report at <https://docs.horizen.io/transparency/>.

## **D.10 Planned use of Collected funds or crypto-assets**

Not applicable as this white paper relates to seeking admission to trading and thus no funds or crypto-assets are going to be collected via a public offer at this stage.

## **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 (admission to trading)

### **E.2 Reasons for public offer or admission to trading**

Admission to trading is sought in order to increase the liquidity of ZEN and to allow for more ecosystem governance participation via increased avenues of access.

### **E.3 Fundraising target**

Not applicable (as this is not a public offer)

### **E.4 Minimum subscription goals**

Not applicable (as this is not a public offer)

### **E.5 Maximum subscription goals**

Not applicable (as this is not a public offer)

### **E.6 Oversubscription acceptance**

Not applicable (as this is not a public offer)

### **E.7 Oversubscription allocation**

Not applicable (as this is not a public offer)

## **E.8 Issue price**

Not applicable (as this is not a public offer)

## **E.9 Official currency or any other crypto-assets determining the issue price**

Not applicable (as this is not a public offer)

## **E.10 Subscription fee**

Not applicable (as this is not a public offer)

## **E.11 Offer price determination method**

Not applicable (as this is not a public offer)

## **E.12 Total number of offered/traded crypto-assets**

All 21 million (21000000) ZEN (i.e. the total supply) are sought to be admitted to trading.

## **E.13 Targeted holders**

ALL (all types of investors)

## **E.14 Holder restrictions**

There are no direct restrictions on the type of persons or entities who may hold ZEN. Tokenholders may freely acquire, hold, and transfer ZEN in accordance with applicable legislation. The Foundation does not impose residency, accreditation, or whitelist requirements on Tokenholders. However, this document does not constitute, and shall not be construed as, a public offer of ZEN in the European Union or in any other jurisdiction. The Foundation is solely seeking the admission to trading of all 21 000 000 ZEN within the European Union in accordance with applicable legislation. Any restrictions that may apply to Tokenholders arise exclusively from the laws or regulations of specific jurisdictions, and it is the responsibility of each Tokenholder to ensure compliance with such legislation.

**E.15 Reimbursement notice**

Not applicable (as this is not a public offer)

**E.16 Refund mechanism**

Not applicable (as this is not a public offer)

**E.17 Refund timeline**

Not applicable (as this is not a public offer)

**E.18 Offer phases**

Not applicable (as this is not a public offer)

**E.19 Early purchase discount**

Not applicable (as this is not a public offer)

**E.20 Time-limited offer**

Not applicable (as this is not a public offer)

**E.21 Subscription period beginning**

Not applicable (as this is not a public offer)

**E.22 Subscription period end**

Not applicable (as this is not a public offer)

**E.23 Safeguarding arrangements for offered funds/crypto-Assets**

Not applicable (as this is not a public offer)

## **E.24 Payment methods for crypto-asset purchase**

The Foundation does not conduct any offering of ZEN and does not intermediate purchases. This document does not constitute a public offer of ZEN. The Foundation is solely seeking the admission to trading of all 21 000 000 ZEN within the European Union.

The methods of payment available for acquiring ZEN depend on the crypto-asset service provider, decentralized exchange, or other trading venue through which the purchase is made. Different platforms may support various payment options, including other crypto-assets or, where applicable, fiat currency. The Foundation does not prescribe, control or restrict payment methods used on any such platforms or service providers.

## **E.25 Value transfer methods for reimbursement**

Not applicable (as this is not a public offer)

## **E.26 Right of withdrawal**

Not applicable (as this is not a public offer)

## **E.27 Transfer of purchased crypto-assets**

After purchase, ZEN is transferred to Tokenholders in the form of ERC-20 tokens on the Base Network. Settlement of purchases occurs directly on-chain through ERC-20 smart contract transfers. Neither the Foundation or the Horizen DAO intermediate or control the transfer process, which is fully automated and governed by the ERC-20 standard on Base.

Whenever ZEN is purchased within a trading platform or via another crypto-asset service provider, the purchased ZEN is credited to the buyer's designated wallet, which may be a self-custodied wallet or a custodial account operated by the platform or service provider.

## **E.28 Transfer time schedule**

Not applicable (as this is not a public offer)

## **E.29 Purchaser's technical requirements**

Tokenholders require a wallet compatible with the Base Network and capable of receiving and storing ERC-20 tokens in order to purchase, hold, and transfer ZEN. Access to and secure management of private keys or recovery credentials is essential for the use of self-custodied wallets. All transfers of ZEN on Base require Ether (ETH) to pay transaction fees (“gas”). Tokenholders who choose to hold ZEN through custodial accounts (e.g. within trading platforms) may rely on the custodian to manage these technical requirements on their behalf. All Tokenholders are responsible for ensuring that their chosen wallet or trading platform supports ERC-20 tokens on the Base Network. The Foundation assumes no responsibility of providing any wallet software, custody services, or technical support.

## **E.30 Crypto-asset service provider (CASP) name**

Not applicable. There is no CASP appointed or mandated for placing of ZEN.

## **E.31 CASP identifier**

Not applicable. There is no CASP appointed or mandated for placing of ZEN.

## **E.32 Placement form**

NTAV – Not applicable

## **E.33 Trading platforms name**

Admission to trading is sought on the following MiCA-authorized trading platforms for crypto-assets within the European Economic Area:

- **Revolut Digital Assets (Europe) Ltd (CY)**
- **360 Treasury Systems AG (DE)**
- **Baden-Württembergische Wertpapierbörse GmbH (DE)**
- **Payward Global Solutions Limited / Kraken (IE)**
- **Bitstamp Europe S.A. (LU)**
- **OKCoin Europe Limited / OKX (MT)**

- **Zillion Bits Limited / ZBX (MT)**
- **Gate Technology Limited / Gate.io (MT)**
- **One Trading Exchange B.V. (NL)**
- **Bitvavo B.V. (NL)**
- **zerohash europe B.V. (NL)**

These trading platforms independently determine whether to list ZEN, and the Foundation does not control or influence such decisions.

### **E.34 Trading platforms Market identifier code (MIC)**

ISO 10383 MIC values are four-digit identifier codes, which the Foundation has identified as follows for the aforementioned operators of trading platforms within Field E.33:

- **Revolut Digital Assets (Europe) Ltd – REVX**
- **360 Treasury Systems AG – 360T**
- **Baden-Württembergische Wertpapierbörse GmbH – XSTU**
- **Payward Global Solutions Limited (Kraken) – PESL**
- **Bitstamp Europe S.A. – BESA**
- **OKCoin Europe Limited (OKX) – *MIC pending in ISO 10383***
- **Zillion Bits Limited (ZBX) – ZBXE**
- **Gate Technology Limited (Gate.io) – *MIC pending in ISO 10383***
- **One Trading Exchange B.V. – ONEX**
- **Bitvavo B.V. – VAVO**
- **zerohash europe B.V. – ZHEU**

### **E.35 Trading platforms access**

Access conditions will depend on the trading platforms that may list ZEN.

### **E.36 Involved costs**

Not applicable, as these are not known yet. However, this will always depend on the trading platform that may end up listing ZEN and not controlled by the Foundation. For example, the trading platform may charge fees for transferring assets, like ZEN, outside of the platform.

### **E.37 Offer expenses**

Not applicable (as this is not a public offer)

### **E.38 Conflicts of interest**

The Foundation is the legal person seeking ZEN's admission to trading. It acts through its mandatory director under Cayman law and does not directly employ staff. A Special Council, constituted under the Foundation's governance documents, stewards proposals and assists with the Foundation's objectives, but its members are expressly not fiduciaries of the Foundation. Potential conflicts related to admission to trading of ZEN include:

- The Foundation holds ZEN treasury allocations approved by the Horizon DAO and thus benefits from ZEN's potential admission to trading and increased market liquidity.
- The Foundation's Special Council and the director may also be, or in the future become, Tokenholders, creating aligned but potentially conflicted incentives.
- The Foundation may engage third-party service providers for technical, legal, or exchange-related support, some of whom may also hold ZEN.
- Persons advising or assisting the Foundation on the process of having ZEN admitted to trading may receive non-public procedural information.

These conflicts are mitigated by the Foundation's governance framework: the director must implement approved Horizon DAO's decisions but may decline or remediate them if they breach Cayman Island's law, the governing documents, or the Foundation's best interests; the Foundation communicates material decisions and milestones through official channels to mitigate informational advantages; and the Special Council is bound to follow the governance documentation, and its non-fiduciary status is disclosed for transparency.

### **E.39 Applicable law**

Not applicable (as this is not a public offer and this field applies to public offers only)

## **E.40 Competent court**

For any disputes arising out of or in connection with the admission to trading of ZEN, the competent courts of Germany shall have exclusive jurisdiction.

## **Part F - Information about the crypto-assets**

### **F.1 Crypto-asset type**

A crypto-asset other than an electronic money token or an asset referenced token that does not qualify as a financial instrument or otherwise fall outside the scope of MiCA.

### **F.2 Crypto-asset functionality**

ZEN is a fungible ERC-20 token on the Base Network with a fixed maximum supply of 21 million (21 000 000) units. The primary functions of ZEN are:

- **Governance:** Tokenholders collectively govern the Horizen ecosystem through the Horizen DAO, submitting and voting on improvement proposals. The Foundation implements approved decisions in accordance with its governance and applicable law.
- **Ecosystem utility:** ZEN serves as the core token within the Horizen ecosystem, enabling participation in dApps and integrations on Base and across the Ethereum ecosystem.
- **Treasury and sustainability:** Allocations of ZEN fund the operations of the Foundation and the Horizen DAO, including grants, infrastructure, and ecosystem growth initiatives.

### **F.3 Planned application of functionalities**

The planned application of ZEN's functionalities is centered on enabling the Horizen DAO to govern the ecosystem, supporting sustainable funding mechanisms, and expanding utility within decentralized applications. Tokenholders will continue to exercise governance rights by proposing and voting on governance decisions, which shape the technical direction, treasury allocations, and policy frameworks of the Horizen ecosystem. The Foundation will implement these decisions in accordance with its governing documentation and applicable law, ensuring that community-approved governance outcomes are realized.

Developers and ecosystem participants are expected to integrate ZEN into DeFi protocols, liquidity pools, and privacy-oriented applications, thereby embedding the token into broader

Ethereum-based infrastructure. Over time, this integration is designed to deepen ZEN's role as a medium of exchange, governance asset, and ecosystem coordination tool.

Allocations to the Foundation and the Horizen DAO are planned to be applied toward ecosystem growth and sustainability initiatives. This includes supporting grants to developers, infrastructure investments, and long-term programs such as the ZEN Sustainability Initiative, which will deploy resources into projects with the potential to generate recurring value for the ecosystem. Through these applications, ZEN's functionalities are planned to extend beyond governance and into long-term value creation.

## **A description of the characteristics of the crypto-asset, 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, as specified in accordance with paragraph 8 of that Article**

### **F.4 Type of crypto-asset white paper**

OTHR

### **F.5 The type of submission**

NEWT

### **F.6 Crypto-asset characteristics**

ZEN is a fungible, transferable crypto-asset issued as an ERC-20 token on the Base Network (an Ethereum layer-2 blockchain) that has a fixed maximum supply of 21 million (21 000 000) units. Each unit of ZEN is identical and interchangeable, with no differentiation between tokens. The token is designed to be freely transferable between Base-compatible wallets through ERC-20 smart contract calls, subject only to applicable law. ZEN carries no ownership, equity, or profit-sharing rights in the Foundation or any affiliated entity. Instead, its characteristics are defined by its governance utility, fungibility, and ability to be integrated into dApps and liquidity frameworks across the Base Network and the Ethereum ecosystem.

As a result of the July 2025 migration, ZEN exists solely on Base and is no longer supported on the discontinued Horizen mainchain or EON chain. This ensures that all 21 million ZEN is standardized as ERC-20 units, benefiting from Ethereum's security and Base's scalability.

#### **F.7 Commercial name or trading name**

Not applicable (please refer to the [DTI](#) for this information)

#### **F.8 Website of the issuer**

<https://www.horizen.io>

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

2025-11-25

#### **F.10 Publication date**

2025-11-25

#### **F.11 Any other services provided by the issuer**

Not applicable

#### **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**

KL03F6N2L

#### **F.14 Functionally fungible group digital token identifier, where available**

T9QL1ZT5D

#### **F.15 Voluntary data flag**

Not applicable (as this is not a public offer and this field applies only to public offers)

#### **F.16 Personal data flag**

Yes

#### **F.17 LEI eligibility**

eligible

#### **F.18 Home Member State**

Germany

#### **F.19 Host Member States**

Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden.

### **Part G - Information on the rights and obligations attached to the crypto-assets**

#### **G.1 Purchaser rights and obligations**

Purchasers acquire ZEN as a fungible ERC-20 token on the Base network without any ownership, equity, or profit-sharing rights in the Foundation or any affiliated entity. Holding ZEN does not entitle Tokenholders to dividends, distributions, or claims over the assets of

the Foundation. The principal right attached to ZEN is participation in the governance of the Horizen ecosystem through the Horizen DAO. Tokenholders may submit proposals and vote on improvement measures, which direct treasury allocations, guide protocol upgrades, and shape ecosystem priorities. These governance rights are executed according to the Horizen DAO Constitution and implemented by the Foundation subject to its governing documents and applicable law. Tokenholders have the right to freely transfer, hold, and use ZEN across the Base Network and within applications that integrate ZEN. In parallel, Tokenholders bear the responsibility to comply with any applicable laws and regulations in their jurisdictions, including restrictions on holding or transferring crypto-assets where such laws may apply.

## **G.2 Exercise of rights and obligations**

The rights attached to ZEN are exercised primarily through the Horizen DAO's governance process, as outlined in field G.1 above. Voting power is proportional to the amount of ZEN held, and participation is facilitated via governance platforms that interface with the Horizen DAO. The outcomes of approved proposals are implemented by the Foundation, as outlined in field G.1 above, and subject to the Foundation's governing documents and applicable law.

Obligations associated with holding ZEN are exercised individually by Tokenholders. Each Tokenholder is responsible for managing their own wallets, private keys, and compliance with applicable regulatory requirements in their jurisdiction. The Foundation does not assume any responsibility related to custody, technical support, or compliance. Its role here is solely to implement the governance outcomes approved through the Horizen DAO.

In practice, Tokenholders exercise their rights by interacting with Base-compatible wallets and smart contracts, enabling them to transfer ZEN, participate in dApps, and cast governance votes. The exercise of these rights is voluntary, and Tokenholders who choose not to participate in governance still retain full ownership and transferability of their ZEN.

## **G.3 Conditions for modifications of rights and obligations**

The rights and obligations attached to ZEN may be modified only through the governance processes of the Horizen DAO. Tokenholders may propose amendments, which are subject to community discussion and token-based voting. If approved, such proposals become binding directions for the Foundation, which is responsible for implementing them in accordance with its governing documents. Any modification must remain consistent with the Foundation's Articles of Association, Memorandum of Association, and Bylaws, as well as applicable law. The Foundation's director retains authority to decline or remediate

implementation of a governance decision if such implementation would breach Cayman Islands' law, the Foundation's governing documents, or the Foundation's best interests.

#### **G.4 Future public offers**

Not applicable as none are planned currently. If a public offer were to be conducted in the future, it would likely be decided by the Horizen DAO and provisioned by the Foundation.

#### **G.5 Issuer retained crypto-assets**

The Foundation retains a defined allocation of ZEN as approved by the Horizen DAO. In accordance with the approved decision ZenIP 42407, the Foundation has been allocated 2 000 000 ZEN over a four-year period, of which 500 000 ZEN became available at the completion of the migration to Base on 23 July 2025. The remaining 1 500 000 ZEN vest in equal monthly installments for 48 months. These retained tokens are reserved exclusively to finance the Foundation's operations, including governance support, infrastructure maintenance, ecosystem development, and community grants. The Foundation does not distribute retained tokens to its director, the Special Council, or any private individuals.

Separately, the Horizen DAO has been allocated approximately 3 000 000 ZEN over the same four-year period, with 750 000 ZEN released at migration and the remainder vesting monthly for 48 months. Of this allocation, 2 000 000 ZEN are earmarked for the ZEN Sustainability Initiative, intended to fund ecosystem projects with potential long-term revenue generation. These tokens remain under the control of the Horizen DAO's treasury and are managed in accordance with governance proposals approved by Tokenholders.

All retained ZEN, whether held by the Foundation or by the DAO, are applied exclusively to advancing the Horizen ecosystem in line with the project's governance processes.

#### **G.6 Utility token classification**

No

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

Not applicable

## **G.8 Utility tokens redemption**

Not applicable

## **G.9 Non-trading request**

Admission to trading is sought.

## **G.10 Crypto-assets purchase or sale modalities**

Not applicable as the admission to trading of the tokens is sought.

## **G.11 Crypto-assets transfer restrictions**

There are no restrictions imposed by the Foundation on the transfer of ZEN. As an ERC-20 token on the Base Network, ZEN is freely transferable between Base-compatible wallets through standard smart contract transactions. The only limitations that may apply to the transferability of ZEN are those arising under applicable laws or regulations, such as financial sanctions or restrictions on crypto-asset trading in certain jurisdictions. In addition, while the Foundation's and the Horizen DAO's allocated tokens are subject to vesting schedules, once released from vesting these tokens are transferable without restriction. The Foundation does not maintain or enforce any whitelist, lock-up, or other contractual mechanisms that would limit the ability of Tokenholders to transfer ZEN.

## **G.12 Supply adjustment protocols**

No

## **G.13 Supply adjustment mechanisms**

Not applicable

## **G.14 Token value protection schemes**

No

## **G.15 Token value protection schemes description**

Not applicable

## **G.16 Compensation schemes**

No

## **G.17 Compensation schemes description**

Not applicable

## **G.18 Applicable law**

The laws of the Federal Republic of Germany.

## **G.19 Competent court**

The competent court of first instance shall be the Frankfurt am Main Local Court. Contact details of the competent court:

Address: Gerichtsstraße 2 60313 Frankfurt am Main

Phone number: +49 (0) 69 1367 01

Fax: +49 (0) 69 1367 2030

## **Part H – information on the underlying technology**

### **H.1 Distributed ledger technology (DLT)**

Not applicable (please refer to the [DTI](#) for this information)

## **H.2 Protocols and technical standards**

The Base Network is a Layer-2 (L2) solution on Ethereum, created by Coinbase and developed using Optimism's OP Stack. L2 transactions lack their own consensus mechanism and are instead validated by execution clients. A key component in this process is the sequencer, which regularly bundles stacks of L2 transactions and publishes them onto the Layer-1 (L1) network, which for Base is Ethereum. This means that Ethereum's consensus mechanism, which operates on Proof-of-Stake (PoS), indirectly secures all of the Base Network's transactions once they are committed to L1. An integral part of the Base Network's ecosystem is the use of the ERC-20 token standard, which is the foundational framework for fungible tokens on the Ethereum blockchain. ZEN operates under this standard, ensuring compatibility with a wide array of wallets, exchanges, and dApps within the Ethereum ecosystem. The ERC-20 standard defines a set of rules that all compliant tokens must follow, enabling seamless interactions, including transfers, balance inquiries, and approval mechanisms. This standardization facilitates the efficient integration of ZEN into various DeFi platforms and enhances its utility within the Base Network.

## **H.3 Technology used**

The Base Network inherits Ethereum's security guarantees by periodically publishing state commitments to Ethereum mainnet, while enabling lower transaction costs and higher throughput than direct execution on Ethereum. As an ERC-20 token, ZEN simultaneously benefits from compatibility with the established Ethereum ecosystem. It can be stored in any Base-compatible Ethereum wallet, transferred via standard smart contract calls, and integrated into dApps and liquidity pools that support ERC-20 tokens.

## **H.4 Consensus mechanism**

Please refer to Section [H.2](#) above.

## **H.5 Incentive mechanisms and applicable fees**

As ZEN transfers occur on Base, an OP Stack-based optimistic rollup that posts transaction data to Ethereum, ordering and batching of transactions is performed by the chain's sequencer (that was initially operated by Coinbase), while final security and settlement are anchored to Ethereum's validator set. Thus, withdrawals are protected by the OP Stack's fault-proof model; ZEN itself is not used for block production, staking, or slashing on Base.

In the absence of a consensus mechanism on Base, an additional mechanism is implemented to restrict withdrawals only to existing funds. When a user initiates a withdrawal request on Ethereum, it must remain unchallenged for a specified duration before funds can be released from Base. During this period, any other user can submit a fault-proof request, triggering a dispute resolution process. This process is structured with economic incentives to encourage users to adhere to the correct behavior.

Fees for transferring ZEN are standard ERC-20 transaction fees on Base, paid in ETH. Each transaction includes an L2 execution fee (EIP-1559 style base fee plus any priority tip) and an L1 data/security fee to publish the batch to Ethereum. Base documents these as the L2 execution fee and L1 security fee. The Foundation does not charge any protocol-level fees for holding or transferring ZEN, and any trading or withdrawal fees on service providers or trading platforms are set by those service providers and platforms themselves.

## **H.6 Use of distributed ledger technology**

No, DLT not operated by the issuer or a third-party acting on the issuer's behalf

## **H.7 DLT functionality description**

Not applicable

## **H.8 Audit**

Yes

## **H.9 Audit outcome**

A Security Audit of Horizon Migration Tools was conducted by Cantina between 7th and 15th of May 2025: <https://cantina.xyz/portfolio/f3d1defb-1686-41ea-b602-0a03e6b824b2>.

## **Part I – Information on risks**

## **I.1 Offer-related risks**

### **1. Market volatility**

The price of ZEN is primarily determined by supply and demand dynamics on global markets and trading venues. Crypto-assets are typically subject to extreme price fluctuations, which may be driven by overall market sentiment, macroeconomic factors, regulatory announcements, or events specific to the crypto sector. Sudden and/or significant price fluctuations could result in financial losses for Tokenholders.

### **2. Regulatory uncertainty**

The legal and regulatory treatment of crypto-assets remains uncertain and varies significantly across jurisdictions. While MiCA is generally expected to harmonize rules within the European Union, global regulatory approaches differ and may impose restrictions on trading, custody, or use of ZEN. Future legislative changes, enforcement actions, or divergent international rules could negatively affect ZEN's tradability, liquidity, or value.

### **3. Operational and technical**

As with any blockchain infrastructure, Base and Ethereum face operational risks, including potential network outages, transaction delays, or forks. High transaction volumes, malicious spam, or unforeseen vulnerabilities could strain the systems. Despite rigorous testing, software bugs or exploits could still occur, impacting reliability or Tokenholders' assets.

### **4. Liquidity**

Liquidity of ZEN on trading venues cannot be guaranteed. Limited trading volumes may result in high price volatility or difficulty entering and exiting positions at desired prices. Different trading venues or exchanges may also impose varying restrictions, such as withdrawal limits or limits on order types, which could affect liquidity.

### **5. Smart contracts and integration**

As an ERC-20 token, ZEN relies on smart contracts that govern its issuance and transfer. While these smart contracts have undergone testing, vulnerabilities or exploits cannot be entirely ruled out. Furthermore, integrations of ZEN into dApps, liquidity pools, or third-party protocols introduce dependencies on external codebases and operational practices, which may expose Tokenholders to additional risks.

### **6. Key-personnel and project sustainability**

The Foundation is structured and capable of operating without employees, acting through its sole mandatory director and supported by the Special Council in accordance with its

governing documentation. However, while the Foundation is structured to reduce reliance on individuals, its effectiveness still depends on competent stewardship and continuity of governance by the Horizen DAO. Loss of expertise, reduced community engagement, or failure of governance processes could impair the long-term sustainability of the project.

## **I.2 Issuer-related risks**

### **1. Dependence on the Foundation and core developers**

The continued operation of the Horizen ecosystem depends on the Foundation to implement the Horizen DAO's governance outcomes and on external development providers to maintain technical infrastructure. Any disruption, underperformance, or withdrawal of these contributors could impair the whole Horizen project.

### **2. Regulatory and legal risks for supporting entities**

The Foundation is incorporated in the Cayman Islands as a foundation company. Changes in Cayman Islands' law, regulatory investigations, or restrictions on entities supporting the Horizen ecosystem could affect the Foundation's ability to operate or fulfill its mission.

### **3. Governance risk and potential for forks**

The Horizen DAO directs ecosystem governance through Tokenholder voting. Disagreements among Tokenholders or governance deadlocks could result in contested decisions or competing network forks, potentially fragmenting the ecosystem.

### **4. Operational and infrastructure risks**

The Foundation depends on multiple counterparties such as service providers and infrastructure partners. Failures, outages, or contractual disputes with these entities could limit the Foundation's ability to perform operational functions disrupting the ecosystem.

### **5. Funding continuity risks**

The Foundation's financial resources consist primarily of ZEN allocated by the Horizen DAO, most of which vest over a four-year schedule. Its operational capacity is therefore heavily dependent on the market value of ZEN. A sustained decline in value could limit funding.

### **6. Reputational risks**

Adverse publicity, disputes among governance participants, or security incidents involving the ecosystem could damage the Foundation's credibility and undermine confidence in ZEN.

### **7. Industry risks**

Broader developments in the crypto industry, such as failures of custodians or DeFi protocols, could negatively impact the Foundation's activities even if not related to ZEN.

## **8. Unforeseen risks**

The Foundation, Horizen DAO or ZEN may encounter risks not currently anticipated, including legal, operational, or technological developments. These unforeseen risks could materially affect the Foundation's ability to support the Horizen ecosystem.

## **I.3 Crypto-assets-related risks**

### **1. Market volatility and price**

ZEN, like other crypto-assets, may be subject to significant price fluctuations and its price may rise or fall rapidly due to global supply and demand, market sentiment, or broader conditions in the crypto-asset sector. Sudden price movements can result in substantial gains or losses for Tokenholders, and there is no assurance of price stability.

### **2. Lack of intrinsic value**

ZEN does not represent equity, ownership rights, or entitlements to cash flows from the Foundation or any other entity. Its value depends entirely on its perceived value within the Horizen ecosystem and the willingness of others to acquire or use it. As such, Tokenholders face the risk that market demand may diminish, reducing ZEN's value.

### **3. Liquidity and availability**

The liquidity of ZEN in trading venues or exchanges cannot be guaranteed. Periods of limited trading activity may lead to price slippage or difficulty executing transactions at desired prices. Different venues may also impose varying conditions, such as withdrawal limits or order restrictions, which could further affect ZEN's liquidity.

### **4. Custody and key management**

Tokenholders who choose to self-custody ZEN must safeguard their private keys or recovery credentials. If these are lost, stolen, or compromised, access to ZEN is permanently lost, as transactions on Base are irreversible. Custody risks may also arise if Tokenholders rely on exchanges or third-party custodians. Storing crypto-assets on wallets custodied by counterparties introduces counterparty risks, including the failure of the other party to fulfill their obligations. Tokenholders may face potential losses due to factors such as insolvency, regulatory non-compliance, or fraudulent activities by said counterparties.

### **5. Regulation and taxation**

The regulatory treatment of crypto-assets is still developing and may vary significantly across jurisdictions. While MiCA harmonizes rules in the EU, other jurisdictions may impose restrictions on trading, transfer, or custody. Tax regimes applicable to crypto-assets may also change, imposing reporting obligations or new tax liabilities on Tokenholders.

## **6. Security and technology**

ZEN operates as an ERC-20 token on Base, which depends on Ethereum for settlement and data availability. Bugs, vulnerabilities, or malicious attacks affecting Base, Ethereum, or ZEN's smart contracts could compromise ZEN. Tokenholders may suffer losses if exploits occur in any of the supporting infrastructure of ZEN.

## **7. Concentration of holdings**

Large individual Tokenholder positions may lead to concentration of voting power. This concentration could enable a small group of participants to disproportionately influence governance outcomes, potentially at the expense of the wider community.

## **8. Governance**

The Horizen DAO is governed through Tokenholder voting. Therefore, if participation is low or dominated by large Tokenholders, governance outcomes may not reflect the preferences of the broader Horizen community. Additionally, disputes over governance proposals or contentious decisions could lead to governance instability or even forks.

## **9. Integration and interoperability**

ZEN is intended to be integrated into DeFi protocols, dApps, and bridges on Base and Ethereum. These integrations depend on external smart contracts and systems that the Foundation does not and cannot control. Failures, exploits, or mismanagement of third-party systems could result in loss of ZEN or reduced functionality.

## **10. Reputation**

Negative developments in the wider crypto industry, such as failures of major custodians or DeFi projects, may adversely affect confidence in ZEN. Similarly, any security incident or governance dispute specific to Horizen could damage ZEN's reputation and hinder adoption.

## **11. Macroeconomics and environmental factors**

Global macroeconomic conditions, such as inflation, rising interest rates, or currency instability, can indirectly impact demand for ZEN. Additionally, geopolitical tensions, market downturns, or environmental debates about blockchain technology may reduce participation and investments in crypto-assets in general, thereby also including ZEN.

## **12. Unforeseen risks**

As with all crypto-assets, ZEN may be subject to risks that are not currently identifiable. Emerging technological, regulatory, or market developments could introduce unexpected challenges that materially affect its value, utility, or tradability.

### **I.4 Project implementation-related risks**

#### **1. Development**

The success of the Horizen ecosystem depends on the timely and secure development of its infrastructure and applications. Delays, underperformance, or technical challenges in building new features or maintaining existing systems could slow adoption and weaken confidence in ZEN. Development efforts rely on external contributors and service providers, which adds to the potential risk of bottlenecks or misaligned priorities.

#### **2. Operation and execution**

The operation of the Horizen ecosystem requires effective execution of governance decisions, treasury allocations, and strategic initiatives. Failures in execution, whether due to inadequate oversight, administrative errors, or breakdowns in coordination among stakeholders, may prevent the project from meeting its stated objectives.

#### **3. Governance**

The Horizen DAO governs the ecosystem through Tokenholder voting. Low participation, governance capture by large Tokenholders, or conflicting proposals could undermine decision-making. Disputes or contentious governance outcomes may result in gridlock, instability, or even competing forks of the ecosystem.

#### **4. Markets and investors**

Adoption of ZEN depends on the willingness of market participants to trade and hold the token. A lack of interest from exchanges, trading venues, or institutional investors could reduce liquidity and hinder the project's growth. Conversely, speculative trading may create volatility that distracts from the project's long-term objectives.

#### **5. Partnerships and use-cases**

The Horizen ecosystem's success relies partly on partnerships with developers, applications and third-party service providers. If such partnerships fail to materialize or break down over time, ZEN's integration and utility could be limited. Additionally, reliance on external applications introduces risks related to their technical soundness and business continuity.

## **6. Continuity**

The Foundation has been structured to minimize dependence on individuals, but its ability to fulfill its role still depends on continuity of governance, community engagement, and effective stewardship. Reduced participation by Tokenholders or disengagement of key contributors could compromise the project's sustainability.

## **7. Funding and resources**

The Foundation and the Horizen DAO rely on vested ZEN allocations to finance operations, grants, and ecosystem support. Because these resources are denominated in ZEN, their real-world value is exposed to market volatility. A significant decline in ZEN's price could restrict funding, leading to reduced development and slower project implementation.

## **8. Adoption and ecosystem growth**

The long-term success of ZEN depends on adoption by developers, applications, and Tokenholders. If usage does not expand as anticipated, or if competing projects capture greater market share, the ecosystem's growth may stagnate. Lack of adoption could limit ZEN's utility, liquidity, and perceived value, further limiting growth.

# **I.5 Technology-related risks**

## **1. Interoperability**

ZEN relies on interoperability with the wider Ethereum ecosystem and applications built on the Base Network. While the ERC-20 standard promotes compatibility, differences in implementation across protocols or failures in standards compliance could limit ZEN's seamless use in third-party applications. Incompatibilities or changes in standards may create fragmentation or require technical adjustments that delay adoption.

## **2. Governance upgrades**

The Horizen DAO governs protocol changes and may approve upgrades to smart contracts or system parameters. Errors in governance processes, poorly designed proposals, or lack of consensus could result in flawed or contentious upgrades. These risks may undermine ecosystem functionality or create disputes among Tokenholders.

## **3. Bridges**

Use of bridges between Base, Ethereum mainnet, or other blockchains introduces risks tied to external smart contracts and operators. Bridges are a common target for exploits and hacks in the crypto-asset industry, and vulnerabilities could result in the loss of ZEN or other

assets. The Foundation generally does not and cannot control the development or use of such infrastructure, leaving Tokenholders exposed to third-party security practices.

#### **4. Upgrades and governance**

Even when upgrades are technically sound, their implementation carries risks. Smart contract changes, rollup updates, or adjustments to ecosystem infrastructure may introduce new bugs or unforeseen side effects. If upgrades are not widely adopted or supported, they may cause incompatibility within the ecosystem.

#### **5. Cryptography**

ZEN and the Base Network rely on cryptographic primitives for security, including digital signatures and hashing algorithms. Advances in cryptanalysis or future developments such as quantum computing could weaken these protections. If underlying cryptography becomes vulnerable, Tokenholders' assets and transactions may be at risk.

#### **6. Network**

As an ERC-20 token on the Base Network, ZEN depends on both the Base sequencer and Ethereum mainnet for settlement. Outages, downtime, or censorship at the sequencer level could temporarily delay or block transactions. Ethereum network congestion or forks may also affect transaction costs or finality of transfers.

#### **7. Dependencies**

ZEN's security and functionality are dependent on multiple layers of infrastructure, including the Base rollup, Ethereum mainnet, wallets, and DeFi protocols. Failures or vulnerabilities in any of these dependencies could impact Tokenholders. Because many of these systems are outside the Foundation's control, risks cannot be fully mitigated.

### **I.6 Mitigation measures**

#### **1. Fixed supply and transparent distribution**

ZEN has a capped maximum supply of 21 million tokens, eliminating the risk of uncontrolled inflation. Allocations to the Foundation and the Horizen DAO are subject to predefined vesting schedules, and all treasury wallets are publicly labelled on Base. This transparency allows Tokenholders and third parties to independently verify balances and transfers.

#### **2. Governance framework**

The Horizen DAO enables Tokenholders to collectively shape the ecosystem through proposals. Proposals are openly published and debated before voting, reducing the risk of uninformed decision-making. The Foundation's director must implement approved proposals but retains authority to decline or remediate measures that would breach law or the Foundation's governing documents, providing a safeguard against harmful decisions.

### **3. Special council oversight**

The Special Council supports continuity and procedural integrity in governance. Its responsibilities include stewarding proposals and ensuring adherence to governance processes. Because its composition and decision-making rules are set out in the Foundation's documents, its role helps mitigate risks of governance capture or inaction.

### **4. Code quality testing and audits**

ZEN is implemented as an ERC-20 token on Base, leveraging a widely adopted and well audited standard. Migration contracts and vaults were tested prior to deployment to minimize vulnerabilities. Ongoing reliance on established standards helps ensure interoperability and reduces risks associated with custom or experimental code.

### **5. Public reporting and disclosures**

The Foundation and the Horizen DAO issue transparency updates. These disclosures provide information on treasury balances, allocations, governance outcomes, and ecosystem activities, reducing information asymmetry and improving accountability to Tokenholders.

### **6. Treasury sustainability methods**

The Horizen DAO has dedicated 2 million ZEN to the ZEN Sustainability Initiative, intended to fund ecosystem projects with recurring revenue potential. The Foundation has discretion to deploy idle treasury capital into low-risk yield strategies, extending its operational runway and ensuring continuity of funding regardless of short-term market fluctuations.

### **7. Decentralized custody options**

Tokenholders may self-custody ZEN in Base-compatible wallets, retaining full control over their assets without reliance on intermediaries. At the same time, Tokenholders who prefer custodial arrangements may use exchanges or custodians. This flexibility allows Tokenholders to manage custody in line with their own risk tolerance.

### **8. Ecosystem diversification**

ZEN's functionality extends beyond governance to participation in dApps, liquidity provision, and integrations on Base and Ethereum. Diversification of use-cases reduces reliance on a single application or partnership, strengthening resilience and long-term adoption potential.

## **9. Legal and compliance structure**

The Foundation is established as a non-profit foundation company under Cayman law, which prohibits profit distribution to directors or members. Its governance documents require compliance with applicable law when implementing DAO decisions, ensuring that governance outcomes are executed within a defined legal and regulatory framework.

## **10. Community engagement and open development**

Development progress, governance proposals, and ecosystem initiatives are openly shared with the Horizen community. This transparency encourages participation by a wide base of Tokenholders, reducing reliance on a small group of actors. Broad community involvement distributes knowledge, builds trust, and supports long-term ecosystem sustainability.

# **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**

### **S.1 Name**

The Horizen Foundation

### **S.2 Relevant legal entity identifier**

25490025UDB7IZN7JM76

### **S.3 Name of the crypto-asset**

Horizen (ZEN)

## **S.4 Consensus Mechanism**

Please refer to Section [H.2](#) above.

## **S.5 Incentive Mechanisms and Applicable Fees**

As ZEN transfers occur on Base, an OP Stack–based optimistic rollup that posts transaction data to Ethereum, ordering and batching of transactions is performed by the chain’s sequencer (that was initially operated by Coinbase), while final security and settlement are anchored to Ethereum’s validator set. Thus, withdrawals are protected by the OP Stack’s fault-proof model; ZEN itself is not used for block production, staking, or slashing on Base.

In the absence of a consensus mechanism on Base, an additional mechanism is implemented to restrict withdrawals only to existing funds. When a user initiates a withdrawal request on Ethereum, it must remain unchallenged for a specified duration before funds can be released from Base. During this period, any other user can submit a fault-proof request, triggering a dispute resolution process. This process is structured with economic incentives to encourage users to adhere to the correct behavior.

Fees for transferring ZEN are standard ERC-20 transaction fees on Base, paid in ETH. Each transaction includes an L2 execution fee (EIP-1559 style base fee plus any priority tip) and an L1 data/security fee to publish the batch to Ethereum. Base documents these as the L2 execution fee and L1 security fee. The Foundation does not charge any protocol-level fees for holding or transferring ZEN, and any trading or withdrawal fees on service providers or trading platforms are set by those service providers and platforms themselves.

## **S.6 Beginning of the period to which the disclosed information relates**

2024-10-16

## **S.7 End of the period to which the disclosed information relates**

2025-10-16

## **S.8 Energy consumption**

5.46000 kWh/a

## **S.9 Energy consumption sources and methodologies**

ZEN is implemented as an ERC-20 token on Base, which itself is a roll-up secured by Ethereum's proof-of-stake network. ZEN does not run or operate a dedicated consensus mechanism, nor does it require additional block production beyond what Base / Ethereum already perform. Therefore, any energy consumed by ZEN is going to be embedded within the broader energy consumption of Base and Ethereum. The following reasoning and assumptions were adopted in order to arrive at the estimated energy consumption:

### **1. Ethereum's energy consumption baseline**

Ethereum's annual electricity consumption is currently estimated being at approximately 2,601 MWh ( $\approx 2\,601\,000$  kWh) per year.<sup>1</sup>

### **2. ZEN's relative share of activity**

Assuming that ZEN transactions represent a fraction of overall Base transaction volume. For example, if ZEN accounts for  $\sim 0.0001\%$  ( $1e-6$ ) of total transaction activity on Base (by count or value), then proportionally  $0.0001\%$  of Ethereum's energy might be allocated to ZEN.

### **3. Adding an adjustment factor for roll-up overhead**

A small overhead factor should be added to account for the additional computation, indexing, RPC endpoints, infrastructure, explorers, and state maintenance required by ZEN-specific activity (e.g. wallet indexing). Thus, a 10 % overhead is applied to the base share.

### **4. Calculating ZEN's energy consumption**

- Ethereum's base energy consumption  $\approx 2\,601\,000$  kWh/a.
- ZEN's share of Ethereum consumption:  $0.000001 \times 2\,601\,000$  kWh/a = 2.601 kWh/a.
- Adding the overhead of 10 %:  $2.601$  kWh/a  $\times 1.10 \approx 2.8611$  kWh/a, which can be rounded up to  $3.00000$  kWh/a for simplicity and an easy-to-read disclosure.

### **5. Rationale for assuming ZEN's share of energy consumption**

The assumption that ZEN represents  $0.0001\%$  of all Ethereum's energy consumption is admittedly slightly aggressive (i.e. conservative for energy attribution). It assumes that ZEN's transaction frequency, smart contract interactions, and ecosystem usage is extremely minor in comparison with all other tokens, bridges, and dApps on Base and Ethereum. If ZEN's usage grows, this fraction would increase, and the energy burden would scale accordingly.

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<sup>1</sup> <https://ethereum.org/energy-consumption/> (accessed on 2025-09-27).

The calculation applies data from the Crypto Carbon Ratings Institute (CCRI, 2025) and the Cambridge Centre for Alternative Finance (CCAF, 2025), which estimate Ethereum's annual consumption at approximately 2.6 million kWh.

Assuming Base accounts for ~7 % of Ethereum's transaction volume and that ZEN represents approximately 0.003 % of Base's total transactions, the proportional energy attribution results in an annualized figure of  $\approx 5.46$  kWh.

## **6. Uncertainty and conservatism**

Because this calculation allocates only a proportional share of the total network infrastructure energy usage, the resulting figure remains sensitive to the assumed transaction share and overhead factors applied. To ensure a conservative estimate, the calculation adopts a small proportional share (0.003 %) and a modest infrastructure overhead, resulting in a lower-bound approximation. It is therefore reasonably expected that ZEN's actual attributable annual energy consumption lies within a range of 1 to 10 kWh per year, reflecting current transaction volumes and network activity levels on the Base chain.